

# The National Locksmith®

January 1993

***Beginning this month!***

## *Security Certificate Program*

- 📖 Special Articles Appear In Each Monthly Magazine!
- 📖 Four Times A Year You Can Take Exams on the Articles!
- 📖 Your Name Embossed On A Personalized Certificate!
- 📖 Earn Gold Seals For Each Exam You Pass! **LOW** Cost!



Inside This Issue: Distributor Profiles & Safe Mini-Section



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**Click on the article  
you wish to read**

#### On The Cover

This cover tells you something about an exciting new program from THE NATIONAL LOCKSMITH magazine. The Security Certificate Program offers continuing education and a Personalized Certificate for every security professional! The cost is minimal and you can study in the privacy of your own home. See the insert for further details.  
(Cover by Marc Goldberg)

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**Editor/Publisher** Marc Goldberg  
**Managing Editor** Tom Seroogy  
**Director of Production** Sandy Kucharski  
**Technical Editor** Robert Sieveking  
**Technical Writers** Carl Cloud, Eugene Gentry, Ed Hill, Jake Jakubowski, Dale Libby, Joseph Locke, Dave McOmie, Rick Ohmit, Don O'Shall, Sara Probasco, Jack Roberts, Shirl Schamp, Tom Seroogy  
**Advertising Sales Mgr.** Thomas Miodoch  
**Advertising Sales Asst.** Debbie Schertzing  
**Circulation Manager** Diane DeGrace  
**Assistant To The Publisher** Crissy Pauley  
**Advisory Board** Keith Levine, Mike Elsberry, Steve Dyson, Buddy Logan, Sean DeForrest



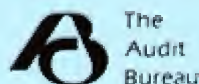
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# Commentary

Look Out 1993...Here We Come!

It hardly seems possible, but here we are...the first month of 1993 is already upon us. If you are like me, you will forget to write in the new year when you date your next several checks. It always takes me a little time to get used to the idea of letting go of one year and beginning the next. Perhaps this has to do with an aversion to aging. My four year old daughter, Samantha, loves her birthday so much that she is constantly trying to advance the date so she can get to the next party. I think that wears off somewhere near 30. Since that age, I have gone into a holding pattern.

Unlike previous years, though, I think most of us will be glad to move onto the new and uncharted waters of 1993. Last year was quite a difficult one. The economy was terrible, America went to war, hurricanes and natural disasters damaged lives and property. Some of our locksmith friends have suffered from both economic, as well as natural, storms.

Now we have the chance to wipe the slate clean. Whether or not you voted for Clinton, it is time to wish him well, and to hope that he will steer the ship of state well into calm and fertile waters.

1993 is going to be our year! *The National Locksmith* is poised to achieve great growth this year, and you will directly benefit from our continued success. Our new Managing Editor, Tom Seroogy, has already talked many of you through technical problems. You will notice his new Bits & Pieces column in this issue. We're excited about this new regular feature that Tom is writing. As he talks to locksmiths, manufacturers and wholesalers, Tom has been coming up with interesting tidbits about changes in products, vehicles, codes, and more. Bits & Pieces will give you a monthly peek into the future of our industry. See page 83.

I want to take a moment and talk to those of you who are reading the boss's copy of this magazine. This is the year to take your own copy of *The National Locksmith*. Our U.S. cost of \$36 per year may seem like a lot of money to spend for a magazine that you can borrow from someone else. However, \$36 is actually a very small sum of money to pay to receive an EDUCATION in the field of locksmithing!

We want each and every locksmith to participate in our

Security Certificate Program. This program offers you your own personalized Certificate, complete with Gold Seals for passing exams printed in *The National Locksmith*. The exams cover articles published in the monthly magazine. (See insert for more details.)

By working toward completion of your Certificate, you will be learning more and more about the security industry. As we all know, the more skills which you have, the more income you can earn. So it is important to receive the best education possible.

Of course there is a catch. Although participating in the Security Certificate Program will cost you virtually nothing, you must be a subscriber. That means you must pay for your own copy of the magazine. Remember, \$36 per year is a small sum to pay in return for an excellent magazine, as well as for Continuing Education.

I urge you all to invest a little bit in yourselves. Increase your skills and improve your income opportunities. We are very proud to offer this educational opportunity to each and every locksmith right in the privacy of your own home.

*The National Locksmith* is pleased to offer you the best magazine, the best writers, the best articles, the best safeman's organization, and now the best educational opportunity. In fact, we present you with the best VALUE a locksmith magazine has ever offered.

You have made our successes possible. For that we thank you. We are determined to continue to earn your trust and your confidence throughout 1993 and beyond. Look out New Year...here we come!



*Marc Goldberg*  
Editor/Publisher

January 1993 5



# Letters

Comments, Suggestions and Criticisms

*The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.*

## New Association Sought In Texas Panhandle

Dear Marc:

I am interested in speaking with people who would be interested in helping me form a new locksmith association. We need a group interested in having educational opportunities here in the Texas Panhandle. Interested parties may contact me to help: Victor Laramore, 401 Red Deer St., Pampa, TX 79065, (806) 665-5397.

## Reader Relates Problem With Custom Security

Dear Marc:

This is a letter of warning to fellow locksmiths. I too, like Mike A. Solarte ordered a pick from Custom Security Products in Simi Valley, California.

To make a long story short, after three months and lots of telephone calls I did finally get a credit on my credit card, for merchandise I returned to Custom Security Products. It's not worth the trouble and headache. The product was unsatisfactory and they

don't like to refund your money.

Austin Hardwick  
West Virginia

## Reader Agrees That Copycats Are A Problem

Dear Marc:

Bob Irmer's letter in your October '92 issue was right on. Scotsman Security is not an isolated case. When we receive complaints that our locks do not work, we ask to see them. 99.9% turn out to be locks made in Red China, sold through Hong Kong. These locks are an exact copy of our original 1968 XL Lock, but made of very inferior materials. Moreover, one company blatantly uses our old catalog sheet with our identification numbers. In fact, the only thing missing from this catalog sheet is the name XL Lock. They sell this inferior look-alike for less than we can produce it.

Our Government refuses to raise duties on these inferior copycat locks, and refuses to uphold U.S. copyright, patent, and trademark laws. Yet our government blames U.S. businesses for job loss to foreign countries, and won't acknowledge use of slave labor in China.

We are not Isolationists, and welcome honest, fair competition, but this is neither honest nor fair competition.

Lou Bone  
President XL Lock Inc.  
California

## Beginner's Need To Be Aware Of Changes

Dear Marc:

I was reading in the September 1992 issue about car opening tools for the '92 Chevrolet Caprice and certain foreign autos, as well as the use of the Slim Jim.

First of all knowing the security that auto makers are building into both foreign and domestic cars (enclosed linkages, rigid, non-pivoting lock pawls) I am seeing the use of the Slim Jim being deleted.

Also, on the '92 Caprice, GM placed a steel barrier which covers the entire linkage, not to mention the child resistant door locking systems which when activated by the push or pull of a slide lever, actually prohibit lock pull up or manipulation.

This means key entry only. You will find this and other systems on GEO, Toyota, Caprice and many others. You might also note that Chrysler, Jeep division in '92 and '93 are building in security systems not denoted on the vehicle which are hooked into their computer. Once the alarm is triggered, it is only resettable with the key, and if knocked off by a Slim Jim door panel removal is necessary to reset the sensor.

My point is that if a beginner locksmith doesn't know these things it can cost him or her time as well as money loss, plus embarrassment.

Willie R. Bowen  
Virginia



[Click here for more information](#)

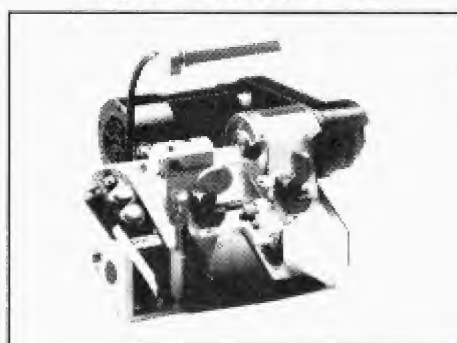
## ASP - Your Auto Service Center for the World



# The 1992 Technitip Contest Winners!

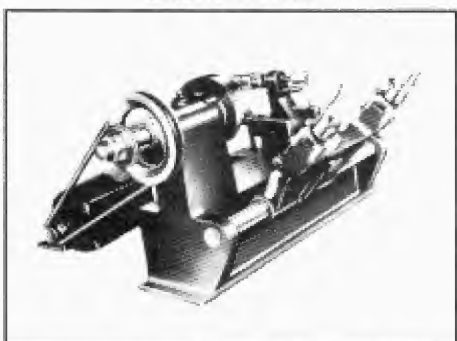
*The very best Tips of the year are rewarded with these great prizes.*

## Silca's Bravo USA



**First Prize: Carlton Overby, Oregon**  
Carlton won first place for his entry on decoding the Simplex push button combination lock. Through a very simple procedure, Carlton describes how to find a lost combination through the disassembly of the lock chamber and the alignment of the wheel slots with the unlocking slide.

## Belsaw 200



**Fourth Prize: Stan McClellan, California**  
Stan makes removing the Weiser 500 series cylinder a snap with his tip. Modifying a Falcon 6 pin blank, Stan showed how the cylinder of this lockset can be removed without taking the whole knob off of the door.

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## Code Books From The National Locksmith

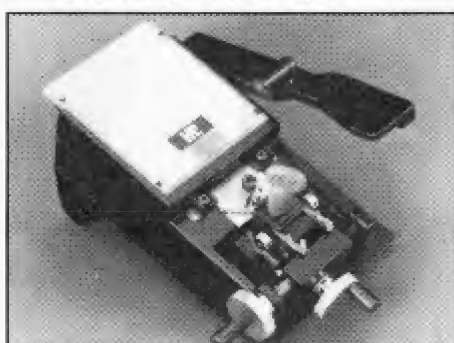
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### General Code Book Set (NGCB)



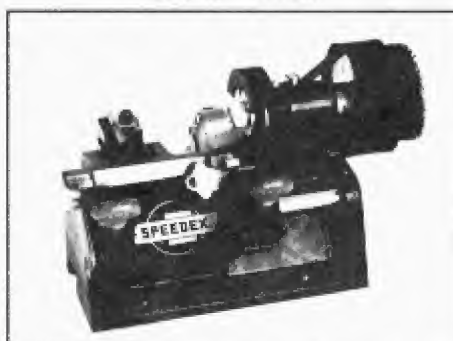
**Seventh Prize: Chester Zawadski, New Jersey**  
To remove a solid retaining pin, drill and tap a small hole at the end of the pin, insert a screw. Then use a pair of pliers to pry up from underneath the screw, lifting both it and the pin out.

## HPC's Punch Machine



**Second Prize: Tom Tussing, Florida**  
Tom earned second place with his tip which involved opening and making keys for the 1992 Mazda RX7. Using a straight, 18" rod, Tom describes how to open the car at the latch. With the car open, he then describes how to remove the door handle so that the key may be ascertained from the lock pawl.

## HPC 9120



**Fifth Prize: Steven Bequpre, Massachusetts**  
Steve's tip shows us how to modify the #701 American padlock to a key retaining function. After removing the cylinder, Steve describes where and how to install a roll pin to give us the new function.

## ESP 5000



**Third Prize: John Mattei, California**  
John's tip describes the removal of the Ford 10 cut ignition. Pick the lock after drilling and applying pressure to the sidebar. Turn the lock to the "ON" position, depress the retainer and remove the lock.

## \$100 Cash & Flat Rate Manual



**Sixth Prize: Gilles Dealur, Ontario, Canada**  
Gilles tip summarizes how to open the #29 Master padlock should the cylinder's tailpiece break or become inoperative. Gilles instructs us in the drilling and removal of the cylinder retaining plate. With the plate removed, access to the shackle latches allows us to open the lock.

### Padlock Code Book Set (NPCB)



**Eighth Prize: Mary Welter, Florida**  
Mary's tip told how to remove the handle from an old screwdriver and reattach it to the Kwikset cylinder removal tool.

### Foreign Code Book Set (NFCB)



**Ninth Prize: Leo Koulogianes, Tennessee**  
Leo's tip concerned broken key extraction on a Toyota ignition. Leo describes how to remove the ignition and then the facecap and plug to gain access to the broken key.



# Technitips

Helpful Hints from Fellow Locksmiths



Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107

by Robert Sieveking

## January's Best Tip

Here's an idea for anyone who is drilling a safe lock, within the dial ring, but needs to use the dial to align the gates or retract the bolt.

The spy-proof dials are easiest, but the same technique will work for non-spy proof dials. Drill a hole through the edge of the dial, then place a nail or punch or something else in the hole to keep the dial from spinning. If you rotate the dial at least five turns clockwise, before pinning it in place, you will minimize the possibility of damaging the drive pins or flies when the hole saw breaks through. The sudden snap/spin of the dial can end the possibility of using the dial for anything, if you shear off a drive pin.

Next, under *low speed*, use a 1-

7/8" holesaw to cut off the outer portion of the dial.

On some safes it is then possible to remove the dial ring, but it is not necessary. Just mark your drill-point and proceed.

When you have completed the hole, the knurled part of the dial is still there to use.

In order to use this procedure on the non-spyproof dials, it is necessary to wedge the dial with

some appropriate device, like a large screwdriver or plastic wedge.

Most S&G and Mosler dials pull very easily, so you may want to think about making a small diameter emergency dial from the salvaged dial hub created by this Technitip.

R. W. Staples  
Washington

\*\*\*\*\*

## These Prizes Awarded Each Month!

All-Lock A-7000 VATS Decoder  
HPC Pistolpick  
Silca Rubberhead Keyblanks (100 blanks)  
ESP PR-13 Professional Lock Pick Set  
Sieveking Products EZ-Pull GM Wheel Puller  
Fort Lock Backer Board Display Panel

*Submit your tip and win!*

## How To Enter

All you need to do to enter is submit a tip, covering any aspect of locksmithing to The National Locksmith. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Robert Sieveking, Technitips' Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will **not be eligible!** So get busy and send in your tips today. You may win cash merchandise, or even one of many key machines or code book sets! At the end of the year, we choose the winners of the listed prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1992? Enter today! It's a lot easier than you think!

## Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you \$25.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker and decal. Plus you are now eligible for the really big prizes!

## Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$35.00 in Locksmith Bucks! Plus you will receive a quartz Locksmith watch, a Bonded Locksmith bumper sticker, decal and a Locksmith Cap. Plus, you may win one of the annual prizes.



### All-Lock VATS Decoder Winner

My tip is for the Ford Taurus or Mercury Sable, when the keys are locked in the trunk and you can't get to or don't have a remote release.

You will need a piece of 1/16" spring wire formed as per illustration one, and a light source. Proceed to the trunk and carefully pry down the rubber weather stripping between the lock and the license plate bulb on the passenger side. Peering inside the trunk, up towards the lock mechanism, you will see the plastic cam and the latch release mechanism.

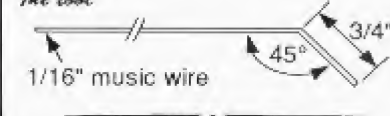
(See illustration 1.) Insert the angled end of the spring wire between the cam and latch release, push up keeping contact with the metal latch release and the trunk lid will pop open. This method is especially helpful when the plastic cam is broken, or the key works but the latch will not release. I hope this tip saves some time and effort for a fellow locksmith.

Carl J. Bourdette  
New York

\*\*\*\*\*

### Special Release Tool opens Ford Taurus trunk

The tool



The Method

metal latch  
release lever

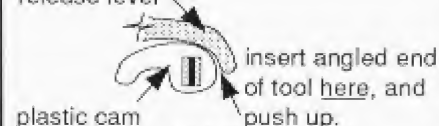


Illustration 1

### HPC Pistolpick Winner

With the new disabilities act, we are seeing more lever locksets in the field. The Kwikset 6 pin lever set is the subject of this Technitip. The lock comes from the factory, with a "cylinder removal key," in addition to the change keys. The only difference between a change key and the cylinder removal key is the blank it is made over. The customer or change key is made over an Ilco AI 176 blank. The change key is made over an Ilco CRI 176. The bitting is the same for both. The change key turns only 90°, to lock or unlock the lockset. The extended tip of the cylinder removal key, however, depresses a retainer at the rear of the plug, which allows the plug to rotate a full 180°. In this position, the cylinder can be removed out the front of the L-handle.

When called to service one of these locksets, where the key has been lost, try this Technitip. Use an old CRI 176, cylinder removal key, to make a "universal removal key." Mill or file away the blade of the key, down to at least a 6 depth. If you are using an HPC 1200 machine, you will have to shift the key over, due to the length of the blade. The Kwikset cylinder does not usually respond well to impression, but it can usually be picked to the 90° position rather easily. Once this has been done, insert the modified CRI 176 into the plug. It will pass under the picked pins, because it has been milled down to the deepest depth. The key will depress the retainer, at the rear of the plug, and allow the plug to be rotated the remaining 90° to the cylinder removal position. Notice also, that the blank prevents the driver pins from entering the keyway and locking up the plug. Remove the cylinder for service, as necessary.



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C. H. Sanders  
Georgia

\*\*\*\*\*

#### Silca Keyblanks Winner

Extracting broken keys from some vehicles can be a real problem. The Geo keys, because of the large head, and deep cuts near the shoulder of the key, are common candidates. This Technitip is one that I have used with much success, to remove these Geo broken keys without disassembling the lock cylinder.

I found that the large round groove in the keyway is large enough to accept the round screw type key extractor. The spiral extractor can be screwed into the keyway, down the warding groove of the key, without interfering with the wafers.

Thread the extractor into the keyway, then push and tap the head portion of the key down over the extractor, allowing the extractor to follow up the warding groove in the key. When properly in position, the lock will most probably be free to turn, as all the wafers will be held up. This means that both parts of the key are joined at the break by the extractor.

The wafers are held back far enough that they will not interfere with the broken piece as it is pulled up, out of the keyway. I use a small pair of Vise-Grip pliers to grip the head portion of the key and the extractor, together. Pull gently on the head of the key, pliers, and extractor, together.

The broken portion of the key will follow the top portion out of the keyway without obstruction or interference from the wafers above the break, or the column locking release lever at the top of the keyway. This Tip can make an otherwise very difficult extraction, fairly easy.

Jerry Gray  
Canada

\*\*\*\*\*

#### ESP Pickset Winner

I'm sure many locksmiths have needed to replace a set screw that was damaged, but just didn't have one on the truck.

Well here is a sure-fire way to make that set screw in a jiffy. Step 1) Take a hollow mounting bolt from a Kwikset deadbolt and clamp it in the vise. The hollow Kwikset bolt is threaded on the inside, and has a slot

cut into the top of it. Step 2) Take any Weiser attachment screw and screw it into the Kwikset bolt, as far down as you want the length of your set screw. Step 3) Saw or file the exposed portion of the screw off. Step 4) Use a narrow/thin blade, in your hacksaw, to cut a slot in the screw. A Dremmel cut-off wheel will work equally well. Use the slot of the Kwikset bolt as your guide. Step 5) Turn out the finished set screw with a straight screwdriver. Now, you'll never be without an Adams-Rite set screw again.

Note, that the home-made set screw is "mild." Because it is not hardened, the slot head will be more fragile than regular set screws. If you over-torque it, you will shear off a portion of the head and be unable to remove it.

M. Rosenthal  
Washington

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#### E-Z Pull GM Wheel Puller Winner

This Technitip is for a simple way to whip the "Big Stick." The Big Stick is a steering wheel lock, very much

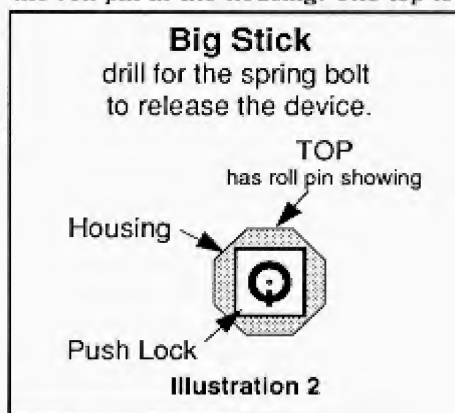


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like the Club, or any number of other similar wheel blocking devices. Recently I was called to remove a Big Stick device from an auto. The problem was that the key would turn, but the device would not release and free the wheel. If you work with push-in type file cabinet locks, you will recognize this symptom. The plug turns with the key, as it should, but the spring bolt will not retract. The retractor lug, either on the rear of the plug or the base of the spring loaded locking bolt has sheared off. The simplest solution for this lockout is to drill a small hole, one inch back from the face of the lock housing, at the top of the cylinder. The "top," as you see in illustration two, can be identified by the roll pin in the housing. The top is



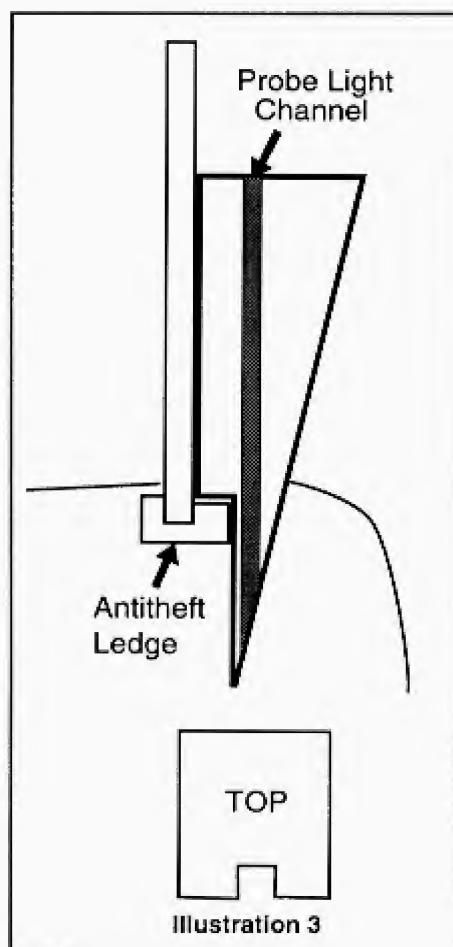
also opposite the "key" (square notch) in the tubular lock keyway. Use a pointed tool or ice pick, through the drilled hole, to depress the spring locking bolt. The plunger type push lock will pop out, and the Stick will be defeated.

Bill Wessel  
California

#### Fort Lock Display Panel Winner

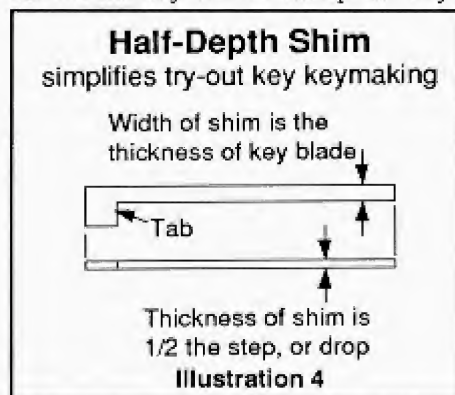
I have found that most vehicles that have an "Anti-Theft" ledge attached to base of the window glass can be penetrated by using a modified wedge. (See illustration 3.) A piece of 3/4" Plexiglas can be purchased from a glass shop for almost nothing, since the size required is usually scrap. by grooving or filing a 1/4" groove in the side, most tools will fit to bypass the anti-theft ledge.

H. L. Whiteford  
California



I would like to share this Technitip because it has been very useful to me. When making keys, using try-out key sets that have "half depth" cuts, there is always a need to re-cut the semi-working key to actual depths. By using a special shim, whose thickness is half the "step" dimension or "drop," of the lock being serviced, you will be able to make the final working key using a key duplicator, in stead of hand filing or using a code machine. This is my method.

The shim, shown in illustration four, is used in the bottom of the key vise of a key duplicator, to raise the pattern key or the cut key. Its width is slightly less than the thickness of the key, which allows the key vise to clamp the key



with the shim under it. The thickness of the shim is about 1/2 the step dimension of the key being cut. (The step dimension, or drop, is the difference between cuts. The Ford 10 wafer key system uses a drop of .026 There is a 26 thousandths of an inch difference between cut depths.) If you measure the thickness of a calling card or greeting card, you will find it to be between .010" and .014" thick. Brass shim stock is also available, in most thicknesses. The shim illustrated is very nearly .013" thick.

After finding a try-out key that operates the lock, duplicate the try-out key over a blank key, without using the shim. Try the key in the lock. This will impression or mark any cuts which are not deep enough. Note which cuts have been marked.

Place the shim under the tryout key and duplicate the whole key. This will raise all of the cuts by a "1/2 step," making all the cuts 1/2 step shallower. Remove the shim from the pattern key side of the duplicator, and place it under the key on the cutting side. Replace the try-out key into the pattern side of the duplicator. This time we will only duplicate those cuts which marked or impressed our first key. The cuts "duplicated" in this second step will be made 1/2 cut deeper than the pattern or try-out key. Try this key in the lock. The "half step" try-out or pattern key has been used as a depth and space key, to produce an accurate working key, with the help of a simple shim.

If you are using a Foley duplicator, you can dial in the half step offset using the micrometer, to eliminate the need for the shim. The principle remains the same. Good luck.

James Sullivan  
California

I carry a hacksaw in my toolbox, but I want to protect the blade from scratching the other tools. I thought of the plastic edge binders that are purchased from most stores that sell school supplies. These are the ones which come with a folded piece of clear plastic into which papers are inserted, then the plastic binder is pushed onto the closed (folded) edge to hold the whole thing together. This piece of plastic snaps over the hacksaw blade and stays, by itself, to protect both the blade and my other tools.

Ted Swirsky  
New Jersey



# Newsmakers

## New Products and Industry News

### CCL Offers New Combination Cam Lock

For increased security in applications such as control or storage cabinets, chest drawers, strong boxes and lockers, the Combination Cam Lock from CCL Security Products is a direct replacement for any standard 3/4" diameter keyed cam lock.

Available in flat and off-set cam designs, the new line of combination cam locks install simply in metal or wood up to 7/8" thick for a variety of applications where increased security and ease of operation is required.

The Combination Cam Lock from CCL features a three-digit combination. The 20-number, vault style dial provides added security with over 1,250 possible combinations. Internally, lock disks are designed to resist vandalism. The CCL combinations cam lock are also performance tested to operate reliably in highly corrosive environments.



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### High Tech Tools' New Model 2100

High Tech Tools' new and improved car opening set, the model 2100, is completely revised and updated with over 1700 pages of information and tools designed to cover car opening and auto servicing for virtually all domestic and imported cars up to 1993.

The 2100 offers new quality photographs and large diagrams of the inside of the car doors, superior constructed tools, a new "Super" wedge designed for optimum efficiency, a new high quality carrying case with ample utility space, organized encyclopedias with easy to reference tabs, a 1993 training video and mini manuals.

For FREE Information  
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### Voice Activated Head By Automatic Gate Supply

For the customer who wants to gain entry by voice activation; this is the first voice activated entry head we know of in the world. Automatic Gate Supply Company is excited to announce the new release of the Voice Activated Entry Head. The entry head has the capacity of 41, 103 or 228 users. Using this revolutionary device

is as easy as saying any three syllable word. This entry head is perfect for driveway entry systems, security alarm systems, security apartment and office entrances and many other applications.

Voice activated entry head comes complete with Controller, Voice Reader and installation/programming instructions. For more details and ordering information contact the company and request literature and a catalog.



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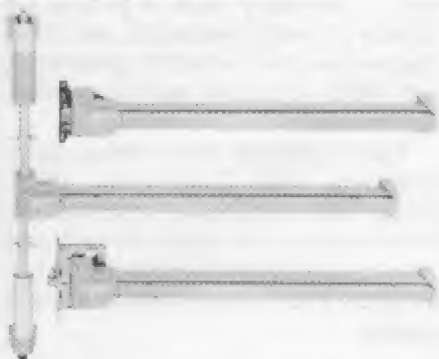
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**Manufacturing Quality since 1956**

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## New Corbin Exit Devices

Corbin Architectural Hardware, a Black & Decker Company, announces the addition of four new exit devices in its 20 Series Low Profile line. There are three new 3 hour fire rated devices including Rim (29U), Vertical Rod (20U), and Mortise (25U) Devices for Class A and lesser fire doors and also a new panic listed Mortise Exit Device (25).



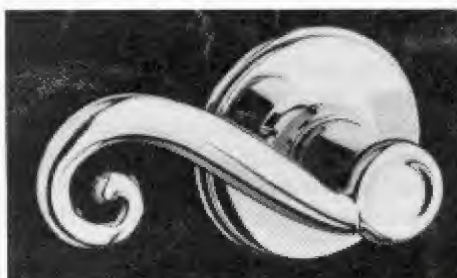
All Corbin 20 Series Low Profile Devices meet ANSI/BHMA A156.3 Grade 1 requirements and are listed by UL for safety as "Panic Hardware". They are constructed of heavy duty wrought steel and are ideal for high use and high abuse applications. A

wide variety of lever, pull, thumbpiece and knob trims are available to satisfy virtually any exit door requirement, including the Americans with Disabilities Act.

For FREE Information  
Circle 286 on Rapid Reply

## Stylish And Affordable Weiser Lockset

The European curl design and graceful styling of Weiser Lock's new Saratoga lever offers the look of fashionable quality with an affordable price. Suitable for closets, bedrooms and bathrooms, the lever can also be used on exterior doors when combined with any Weiser Lock keyed entry knobset style. The Saratoga lever retailing for and economical price, is particularly ideal

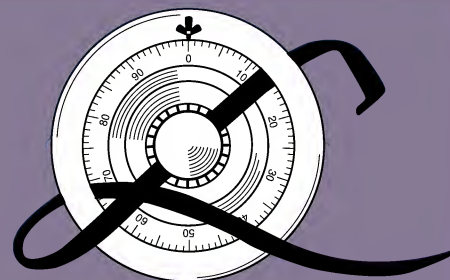
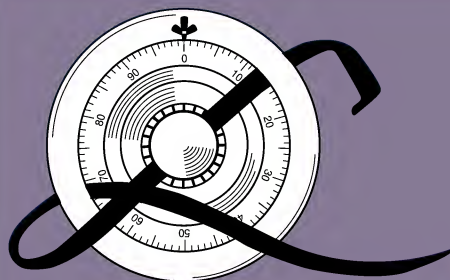


For FREE Information  
Circle 287 on Rapid Reply

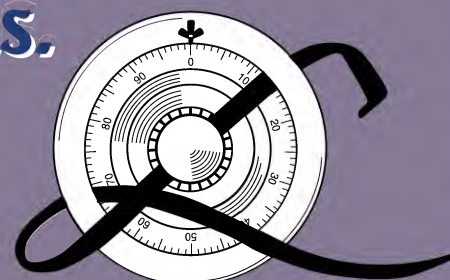
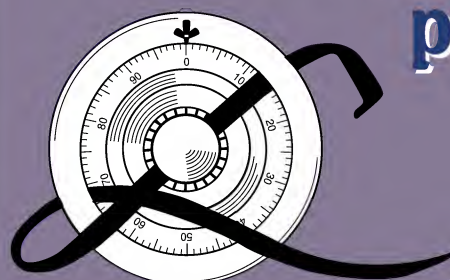
## Paddle Handle By International Door

In our continuous focus of being an industry leader, International Door Closers, Inc. has added a Paddle Handle for their Deadlatch Lock. The handle is extruded aluminum and is field reversible for opposite hand and "Push" or "Pull" operation. This product is competitively priced and available for immediate shipment in AL or DU finish. Choose International for your one source supplier for swinging door hardware and door closers.

For FREE Information  
Circle 288 on Rapid Reply



**Lockmasters has a  
44 year history of  
training security  
professionals.**

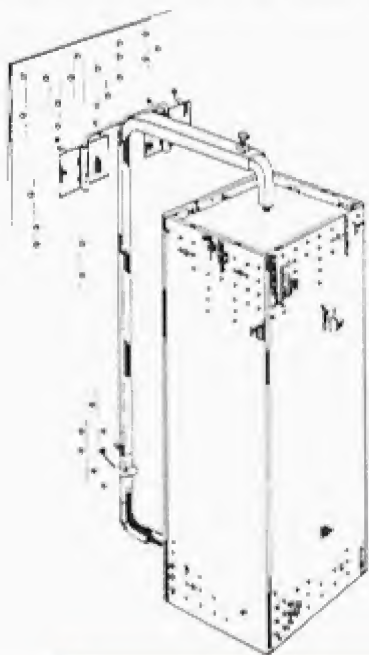


[Click here for more information](#)



### The PGS Display System

The Pegable Gondola Spinner Display System (PGS pronounced pegs) is a unique merchandising display consisting of a rectangular pegboard four sided inner box, which is installed anywhere on existing pegboard gondolas, and turns inside a tubular steel, chrome plated frame.



PGS displays are secured to the pegboard gondolas using two easily installed mounting brackets which evenly distribute up to 300#'s of merchandise over the entire surface of the pegboard. PGS are shipped fully assembled and install in minutes.

The PGS system converts a standard pegboard or slat wall gondola fixture to a four-sided spinner, more than doubling available linear display areas. Dimensions, mounting configurations and pegboard hook size can be varied to accommodate all types of merchandise.

For FREE Information  
Circle 289 on Rapid Reply

### The ED22 Exit Device By APR Industries

APR Industries introduces a new series of exit device, the ED22 Series, that meets the rigorous demands for superior panic hardware. The ED22 is designed for use on flush and wide style doors and fits a 161 stock hollow metal cutout.

The ED22 series exit devices are UL Listed for accident hazard and are tested in accordance to ANSI A156.3,



1984, 1. The ED22 touts a sleek design, heavy steel construction, stainless steel latches and springs and accommodates a wide variety of trim including ball knob and lever handle.

For FREE Information  
Circle 290 on Rapid Reply

### Jackson ADA Exit Devices

Builders Brass Works, through its Jackson Exit Device division, introduces two exit device series to meet the ADA requirement in existing 36 inch doorways: the 2100 and the 3100 series exit devices.

Patented, the slim profile, full door width panic bars have the key minimum dimension at the hinge stile end to meet barrier removal goals. The new 2100 series exit devices easily provide a 32 inch clear width opening on 1-3/4 inch doors without costly design or installation problems.

For FREE Information  
Circle 291 on Rapid Reply

# Major

MANUFACTURING, INC.

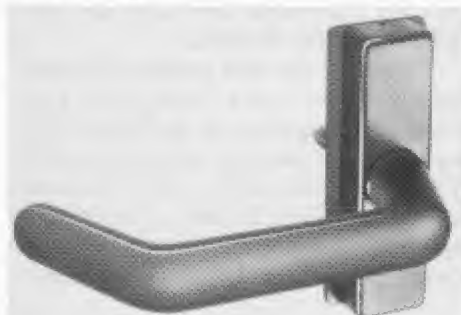
***Installation Tools***  
***The Professionals Choice***

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### Aluminum Lever Handle By Adams Rite

A new lever handle to operate latches in stile and rail aluminum/glass doors has been introduced by Adams Rite Manufacturing Co., Industry, California. It features a return bend at the end of the lever, making it disabled-friendly and suitable under anti-snap code requirements. The 4569 lever is intended mainly for the interior of storefront type doors having only a key-cylinder function on the exterior. It can be used lever by lever in "passage set" situations, however. The escutcheon features hidden mounting screws and is flanged to cover a standard 1 1/4" diameter cylinder hole.



For FREE Information  
Circle 292 on Rapid Reply

### PDQ Adds New Grade 2 Lever

PDQ Industries, Inc., announces the addition of a new Grade 2 lever lock to its family of commercial and residential grade cylindrical locks, mortise locks, interconnected locks, and deadbolts.

Called the SW Patriot Lever, this new lock is being marketed as light commercial/residential grade. With its 3-7/8" lever, the SW Patriot's is a shortened version of PDQ's Grade 2 SV Series Freedom Lever, making the SW Patriot an ideal addition to the PDQ family of lever locks, which now includes levers in Grade 1 SX Series locks, mortise locks, interconnected



locks, Grade 2 SV Series locks, and SR Series Residential Grade locks.

For FREE Information  
Circle 293 on Rapid Reply

### Lock-Tight Central Deadlocking System

Introducing Lock-Tight, a central deadlocking system for cars, trucks and vans. Lock-Tight can be integrated with an alarm system or can stand on its own. There are few other auto security systems which have the available option of integrating directly with an alarm.

When activated, Central Deadlocking stops all entries to your car. A patented actuator is fitted into the doors of your vehicle and connected to the door's button or locking mechanism. While you are driving the front doors can control the rear doors. This is what creates the central locking system.

When you get out of the car and want to lock it, simply press the deadlock button on your hand-held remote control. This will lock the car and deadlock the door's actuator, which will jam the door's locking mechanism into a deadlock position.

For FREE Information  
Circle 294 on Rapid Reply

**medeco**<sup>®</sup>  
HIGH SECURITY LOCKS

**Integrity. Ingenuity....  
security solutions.**

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## Know Your Wholesaler...

## Distributor Profiles

*"In this section you get to take a closer look at a number of the wholesalers serving the security industry."*

### Ace Lock & Security Supply

June of 1992 was a memorable time for Ace Lock & Security Supply of Union, NJ. First, the Company moved to larger quarters by purchasing a 22,000 square foot facility. Also the previous name of Ace Locksmith Co., was changed to Ace Lock & Security Supply, a name that better reflects the Company's distribution business of lock hardware and access control supplies.

Ace Lock & Security Supply is a full line distributor for lock brands like Corbin/Russwin, Yale, Arrow, Marks, Medeco, Sargent, Kwikset and others; the list of manufacturers continues to grow, along with the Company.

From humble beginnings in 1947, Ace founder and entrepreneur, Morris Goldstein, dabbled with baby carriage repairs, lawnmower sharpening, rebuilding door closers, and locksmithing.

The lure of the locksmith business ultimately led to distribution. Today, thousands of locksmiths from around the country rely on Ace Lock & Security Supply for stock. Ilco key blanks, rim and mortise cylinders share the shelf with a variety of locksmith components including cam locks and padlocks by such well known companies as CCL, Olympus, Fort, Hudson, Chicago, American, Master and Abus.

Over 130 manufacturers' products are stocked at the Ace warehouse and are backed by a growing customer service group of knowledgeable people who insure that customer orders are handled with care and accuracy. Stocked items are generally shipped the same day they are called in if the order is placed by 2:00 p.m. Customers so desiring are called back on items that are not available off-the-shelf. Available shelf inventory will be on

computer during the first part of the year, thus allowing customers even faster access to stock information. Smaller customers who have not established credit can charge orders via Visa, Mastercard, or Discover.

Key machine offerings include HPC, Framon, and Ilco; Exit hardware is available from Von Duprin, Adams Rite and Monarch; Door closers include Norton, Yale, LCN and Corbin.

**Circle 256 on Rapid Reply**

### Acme Security Systems

Back in 1970, Steve Harris first became involved in the electronic security arena by installing residential alarms. Then, in 1974, he formally founded Acme Security Systems.

At this time Acme Security Systems began to branch out into access control,

## NATIONAL AUTO LOCK SERVICE, INC.

**National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.**

[www.laserkey.com](http://www.laserkey.com)



electronic hardware installation, CCTV, architectural hardware installation, and commercial alarm systems. As Acme's business continued to grow, so did their knowledge in product applications, product selection, and perhaps, more importantly, the ability to coordinate commercial grade door hardware with access controls and existing job site conditions.

Out of this ability, came customer demand for the door hardware products and in 1980, a wholesale division was created to handle the customers needs.

As time went on and wholesale demands continued to grow, so did stock and product lines. Today, Acme stocks a variety of electric locks, keyless entry systems, exit alarms, door control systems, exit devices, electric power transfers, "ADA 90" automatic operators, and numerous accessories.

In 1989, Acme published its first completely designed in-house catalog. Its compact size has made it a favorite among customers who also appreciate its in depth product information and related technical data section. The catalog was subsequently updated in 1992.

From our beginning in traditional locksmithing and "early on" electronics experience, Acme has grown not only in stature, but in the ability to solve most of its customers hardware dilemmas through technical assistance, trouble shooting, product recommendations, and on hand stock.

Looking forward to 1993 and beyond, Acme will expand its customer service, product base, and sales staff so that we may be better able to serve you.

#### Circle 257 on Rapid Reply

#### Agences W. Pelletier Inc.

The first link of a long chain of locksmiths was created over one hundred years ago when in 1879, Mr. Boudreau established his locksmith shop "Serrurier Boudreau". Mr. James O. Richardson purchased this boutique in February 1899. In April 1939, Mr. Willie Pelletier acquired the "James O. Richardson Locksmith" firm which then became "W. Pelletier Serrurier".

In 1956, Mr. W. Pelletier founded "Les Agences W. Pelletier Inc." which continued progressing by specializing in the distribution of security hardware and locksmith supplies.

The constant evolution of this firm brought us to 1980 when a group of young Quebec entrepreneurs took over from Mr. Willie Pelletier.

In 1991, the firm acquired a competitor in the hardware distribution sector: "Agences Prym En Serrurerie", which was the largest Medeco distributor in Canada.

Today Agences W. Pelletier (1980) Inc. distributes over 10,000 products from well over 100 suppliers, including over 1500 different key blanks and a complete inventory of parts to provide a one-stop shopping concept at competitive prices. A high percentage of our sales is generated by locksmiths in Eastern Canada.

Following an extensive market research, we have come to the conclusion that for the 1990's we must continue to develop a broader market in the electronic

security hardware field. We specialize in a wide range of electronic devices from all the major manufacturers.

The company prides itself to be recognized as one of the best technical information sources for locksmiths. To achieve this level of knowledge, in house sales and service seminars are regularly provided to all employees. Also many locksmiths attend these classes.

Total workforce consists of 21 employees. Our sales and customer service staff includes 12 representatives, salesmen, technicians as well as two locksmiths which ensures that all customers receive accurate information from a very qualified personnel.

#### Circle 258 on Rapid Reply

#### Allied Locksmith Company

For over ten years, locksmiths nationwide have found Allied Locksmith Supply to be the source for foreign and domestic automotive locks. Allied has one of the largest automotive inventories in the country, carrying every item available from Briggs & Stratton Technologies and Auto-Security Products. They have an extensive inventory of Silca and Ilco foreign car and motorcycle key blanks. They also carry All-Lock, Continental Micro, Pro-Lok, Lock Technology, HPC auto-related tools and key machines, along with many other auto-related lines. In all, Allied stocks over 5,000 different items.

Steady growth and dedication to customer service throughout the years has proved worthwhile. Today, Allied is recognized as the foremost nationwide distributor specializing in automotive locks. Allied prides itself on providing competitive prices with a high fill, low backorder ratio. This low backorder ratio, a principle the company was founded on, is one of the best in the industry. Customers have definitely come to depend on it.

As the industry becomes more complex, Allied customers depend on a knowledgeable sales staff. A customer generally knows what item they need but often not a part number. Allied prides itself on knowing every part number they carry. Approximately 30-50% of the orders processed each day requires assistance involving part number identification or application.

Their sales brochure devoted to automotive products, offers their customers a clear, concise layout and a simplified approach to purchasing auto locks. Customers may request to receive these free brochures simply by asking.

With the ever-changing automotive industry, Allied looks forward to the challenge of providing their customers with the broadest product information and best possible service.

#### Circle 259 on Rapid Reply

#### Bell's Security Sales, Inc.

Bell's Hardware was founded in 1929 by Robert Bell, Jr., who was one of the original founders of "The Master Locksmith Association of New Jersey".

In 1964, Richard Middleton worked for Robert Bell while taking locksmith courses. In 1965, Richard started his mobile unit "Hillside Lockshop", as the

exclusive outside serviceman for Bell's Hardware.

Richard purchased the wholesale portion now known as "Bell's Security Sales, Inc.", in 1978. From that point to present, we are distributors for locks, door and window hardware, locksmith tools and supplies.

Sadly, on September 17, 1990, Richard passed away, leaving his wife, Dale; son, Richard II and his extended family at Bell's to carry on. Dennis Jarvis, with 24 years of service, John Ciechowski with 17 years and Kurt Navratil with 10 years are a few of the "Key" members of Bell's.

The tradition of Bell's has always been "personal service" to our customers. All our salesmen have locksmith experience affording us the opportunity to answer technical questions and solve problems. If we do not know the answer, we will get in touch with those who do. You do not speak to a machine.

Presently we represent and stock material for more than 100 manufacturers: for example, Arrow; Schlage Locksets; Master; Abus; American Padlocks; Norton; Corbin; Arrow Door Closers; Medeco High Security; Arrow, Best IC Cores; Locknetics magnetic locks; Ilco/Unican Simplex; Intelock push-button locks; Trine; Rofu Electric openers; National; CCI; Fort Cabinet Locks; Detex Card Readers; HPC; Pro-Lok; LAB; A-1 Locksmith Tools; Ives; Rockwood, Stanley Door Hardware; Briggs & Stratton, Auto Security, All Lock for automotive needs. Bell's stocks a full line of Ilco, Silca and Sargent key blanks and HPC, Ilco and Silca Key Machines.

Bell's believes our service is second to none. We are a family wholesaler with the "personal touch". If an order is called or faxed by 2:00 PM, it will go out that same day via UPS.

#### Circle 260 on Rapid Reply

#### Boston Lock & Safe Company, Inc.

Boston Lock & Safe Company, Inc. is a wholesale supplier where a locksmith can find a "one stop" source of locks, safes and security hardware to meet most of his physical security requirements. Located in the heart of historic Boston, shipments are made from a large "in house" inventory to all parts of the country. These shipments are primarily of Baldwin, Dom, Falcon, Foiger Adams, Locknetics, Medeco, Simplex, and other popular brands. A free masterkeying service is provided for purchases of Falcon Interchangeable Core Locks.

Boston also specializes in locker locks which are masterkeyed to interchange with many discontinued locker lock series, in addition to providing a key made by code number service.

The safe & vault inventory consists of over 2000 safes to meet the varying requirements of size, weight, function, U.L. Label classification, and special design requirements. Brands include Gardall, ISM, AMSEC, New Englander, etc.

Needless to say, one can be assured of talking to a "technical" person knowledgeable in locks or safes when calling the firm. Perhaps one of the largest collection of old lock and safe data, including foreign products, is contained in their reference files. This has served as a



tremendous aid to those nationwide Accredited customer accounts that can avail of themselves specific information per obsolete locks and safes.

Founded by the Winship Brothers and operated by the Stolia family since the early 1900's the company will be celebrating 200 years of service next year. More recently, CC-TV Panasonic and Magnavox equipment has been added to the product range to serve customer demand. The company makes available both an abridge catalog and a full-line catalog to interested parties.

#### Circle 261 on Rapid Reply

##### DiMark International

DiMark International, located in Santa Maria, California, carries specialty supplies as well as many standard lines of locksmith supplies, tools, and resale items. It is the goal of this locksmith-oriented supply house to help locksmiths increase profits and productivity.

As the sole distributor of Borkey key machines for the U.S., they stock a broad range of parts for these German machines as well as American machines including Framon, HPC, Rytan, Scotsman and various others. They are also a sole source for the Steel King and Keyway King machines from Japan.

If you're looking for a wide assortment of key cabinets and cash boxes, you will be pleased to know about DiMark. They are also an excellent source of antique-style furniture locks and keys. Mark and Diane Pirman, President and CPO (respectively) at DiMark, have a thorough locksmith background, having more than 30 years combined in the retail business, both in Santa Monica and in Santa Maria.

More recently, if Mark and/or Diane are occasionally out of the office, they are probably attending to their aviation interests, both being FAA Certified Flight Instructors. Their courteous staff is available from 8:00 to 5:00 PST/PDT, and you can call toll-free from anywhere in the U.S. DiMark usually ships "same day" and accepts Visa and Mastercard if you do not have an open account.

The latest DiMark catalog is No. 11 and is free to locksmiths. It has in-depth information on all products as well as a complete current price list and account application.

#### Circle 262 on Rapid Reply

##### Electric Lock Supply

Electric Lock Supply was founded in 1986 as a spin off of Manchester Lock & Supply, a large locksmith and access control company in the Los Angeles area. The owner, frustrated with the traditional locksmith suppliers unwillingness to stock products and provide technical assistance in the area of electric access, decided to open a supply company that catered solely to this new and growing market. A place where a locksmith, access control contractor or alarm dealer could get all the parts necessary to complete his or her job in one place at one time. Including such items as electric strikes, electric locks, magnetic locks, small card reader systems, digital keypads and keypad systems, power supplies, key switches, push

buttons, relays, door contacts, batteries, door cords, current transfer hinges, wire connectors and technical assistance.

The company was started with approximately 300 square feet in the corner of the lockshop.

Today in 1993, Electric Lock Supply is located in an industrial building a mile from the original lockshop with 4 dedicated and technically savvy employees to help customers with product and technical advice. Electric Lock Supply stocks and or represents approximately 75 different manufacturers. Among them Electric Lock Supply is a master stocking distributor for manufacturers such as Securitron, SDC, Folger Adam, EFF/EFF, Rofu, Trine, Von Duprin, Alarm Lock, Adams Rite, and many more.

#### Circle 263 on Rapid Reply

##### Eljay Express

Eljay Express was founded October 1, 1988 when Ralph and David Menn recognized a need of the small and large locksmith for a reasonably priced, U.S. made lock. Eljay was established as a distributor of Arrow locks and has continued to distribute only Arrow until nine months ago, when four other lines were added. We are now the proud distributor of Arrow locks, Dorma closers, Hager hinges, Hanchett electric strikes, and Ives hardware.

Both Ralph and David are members of the Door and Hardware Institute and David is, in addition, an Architectural Hardware Consultant (AHC).

We've been asked how Eljay Express got its name. David's children's name are Lee and Jodi — the initials L and J. The Express means that, if we have the inventory on our shelves, we ship to our customers within 24 hours.

Eljay Express not only ships promptly, but carries in stock a large inventory. With a line of over 5,000 items, the chances are excellent that we carry what you need when you need it.

We have recently up-graded our computer to get your order on it's way even faster. Although this was a major investment, we felt that it was well worth it in customer satisfaction.

We're pleased that we've been able to fill a need in the hardware industry, and attribute our fantastic growth (0 to 42,000 unit sold a year in four short years) to our commitment to quality and our effort to get the product out to our customers quickly.

#### Circle 264 on Rapid Reply

##### R.A. Graham Co., Inc.

R.A. Graham Company, Inc., a wholesale distributor in Worcester, Massachusetts, recently celebrated its thirteenth anniversary. The firm was founded in April 1979 by Bob Graham, who had previously worked in the wholesale business with locks and contract hardware for more than 25 years.

The company began in the 4,000 square-foot basement of a retail store in Auburn, Massachusetts. It grew rapidly, and soon had seven employees. By 1983, the company had relocated to a warehouse in a former wire mill in Worcester. The

move provided approximately 10,000 square-feet of space. In 1985, the company again expanded its warehouse to 20,000 square-feet and now had 20 employees.

To most effectively service customer needs, the company has continuously added to its product line. Graham uses customer input to determine which new items and new lines should be stocked. R.A. Graham now maintains an inventory of almost \$2 million representing more than 130 manufacturers.

R.A. Graham Co. specializes in builders and contract hardware along with stocking many of the major door lock lines, including Schlage, Weiser, Master, Weslock and Kwikset, in a wide variety of styles, finishes and applications.

The company is also a full-stocking distributor for Brassworks by Kaba, a line of solid brass decorative door hardware. Recently, Graham has made a major investment in stocking the Baldwin Brass Hardware line.

The basic philosophy of the company remains unchanged and still greatly emphasizes service. Orders can be placed by phone, mail or fax and are shipped the same day they are received. There is no minimum to shipping requirement. The knowledgeable telephone staff will check stock to ensure that the needed merchandise will be shipped. Special orders for merchandise not stocked are expedited as quickly and conveniently as possible.

Today, after Bob Graham's death in 1987, the company remains family owned and operated.

#### Circle 265 on Rapid Reply

##### Locksmith Distributors of America

**Acme Wholesale Distributors.** Based out of New Orleans with distribution centers in Houston, San Antonio and their newest location in Fort Worth. Servicing the Door Hardware and Security Industry for over 25 years. Acme's motto is "Large enough to serve you, but small enough to know you."

**Armstrong's Lock & Supply, Inc.** Based out of Atlanta with distribution centers in Miami and Tampa. Servicing the Door Hardware and Security Industry since 1962. "Armstrong's has the merchandise that affords the Locksmith the luxury of one-stop shopping."

**Canada Lock Products.** Based out of Toronto. Servicing the Door Hardware and Security Industry since 1934. Canada Lock prides itself in "Quality service from a knowledgeable and energetic staff."

**Cook's Supply, Inc.** Based out of Denver, Colorado. Servicing the Door Hardware and Security Industry for 15 years. Cook's motto is "No job too big, no Locksmith too small."

**Hardware Sales.** Based out of Detroit with a distribution center in Pittsburgh. Servicing the Door Hardware and Security Industry for over 65 years. Hardware Sales prides itself in being "Your key to Security Hardware since 1925."

**H. Hoffman Co.** Based out of Chicago with distribution centers in Cleveland, Indianapolis, Kansas City, Milwaukee, St. Louis and Rosemont. Servicing the Door Hardware and Security Industry for over 60 years. H. Hoffman Co.'s motto is "Work



Smarter, Not Harder" and offers Mid-American Locksmiths meaningful programs that gives them the time to concentrate on business development.

**M. Taylor, Inc.** Based out of Philadelphia, Pennsylvania. Servicing the Door Hardware and Security Industry for over 80 years. M. Taylor, Inc. prides themselves in being "100% behind the Locksmith."

All LSDA Distributors offer their Locksmith customers the LSDA private brand of security products which is not available for resale through Mass Merchants. In addition all LSDA Distributors carry a full line of National Brands at competitive prices.

**Circle 266 on Rapid Reply**

#### Mayflower Sales

In today's tough market, outstanding performance will set you apart from the competition. Satisfying a customer's needs can place a lot of pressure on Security Professionals who need special hardware or replacement parts. The follow-through on special order handling can require a lot of time and effort. The reliability of your supplier can make or break you in today's "I want it now!" world. The folks at Mayflower can help you stand out from the other guys.

With a successful philosophy of maintaining deep inventory on key lines and providing the parts and technical know-how to support these lines, Mayflower is uniquely positioned for your

future. Maintaining a broad inventory is but one aspect of our success. With close ties to the manufacturers we represent. We have the ability to get what you need within a reasonable time frame. The ability to supply parts and hardware on a special order basis allows customers to rely on timely solutions to their special problems.

While carrying a broad range of locksmith supplies, Mayflower features an extensive inventory of many lines. These include: Adams-Rite, Arrow, Auto-Security Products, Folger Adam, Medeco, Locknetics Security Engineering, Simplex/Unican, Securitron and Yale.

Our quarterly publication, the 'Security Sourcebook(TM)' has become a valuable resource for today's security professional. Featuring new products and special promotions, it's a "must have". If you don't receive it, circle the number below.

With 75 years of service behind them, let the folks at Mayflower improve your performance as a Security Professional.

**Circle 267 on Rapid Reply**

#### Midland Hardware

Established in 1975, Midland Hardware has rapidly grown into a major east coast distributor. They've expanded their operation by constructing a 26,000 square foot facility in Oakland, NJ. This enables them to house their sales force, inventory, shipping department and showroom under one roof.

Midland Hardware is proud of their level of service to their customers. Their motto is "Midland Hardware IS Service...and service starts with the first phone call." When

speaking with any of their representatives, the customer deals with experienced professionals who know door hardware. Midland customers can always be assured of receiving the merchandise ordered when needed, even if next day delivery is necessary. Their on-premises warehouse facility holds an extensive inventory that meets virtually all door hardware needs. From handles and locks to hinges and deadbolts, from economy to high end designer, Midland has it all.

But service is just the beginning because Midland is dedicated to offering quality merchandise at very competitive prices. Whatever the business size or need, the business of their customers is important to Midland Hardware.

They make doing business easy with their complete catalog and knowledgeable sales staff - and they can ship directly to each customer via UPS for guaranteed dependability.

Midland Hardware' new showroom offers the customer the opportunity to see the full range of handsomely displayed products available. They carry only brand names that can be depended on for quality and durability, including Baldwin, Schlage, Master, Omnia, Norton, Von Duprin, Stanley and Kwikset. In addition, Midland helps service your upscale clientele by offering a choice selection of designer and bath hardware.

To sum it up, Midland is committed to quality, dependability and competitive pricing, but most of all...Midland Hardware is service.

**Circle 268 on Rapid Reply**

*Continued on page 26*



**Choose S&G Comptronic  
electronic safe locks for...security...  
technology...tradition.**

[Click here for more information](#)



Continued from page 23

#### Midstates Security

Established in 1981, Midstates Security is a midwest service center for Medeco High Security Locks. Having received their own restricted Medeco keyway, Mid-States can better serve the fast growing high security lock market without the factory lead time. Providing Medeco hardware, including switches, cam locks and specialty locks, Mid-States rekeys, sets up masterkey systems, handles key cutting and maintains key control from its Palatine, IL location. Midstates is a stocking distributor of American Lock Co., Buddy Products, Fort Lock, Latch-Gard Co., Major Mfg., Master Lock, Medeco Lock, Pro-Lok, Rofu, Simplex, Trine. As an authorized service center for these lines,

Mid-States carries a complete line of parts, keyblanks, pins and accessories to handle all service requirements. Mid-States Security is a specialty hardware distributor with service in mind.

**Circle 269 on Rapid Reply**

#### Monaco Lock Company, Inc.

Now in its 26th year of business, Monaco Lock Company, Inc. is one of the largest national authorized stocking distributors in the country. The company specializes in wholesaling electric locking devices, access control products, and door hardware carrying high quality products from today's leading manufacturers. This list includes such names as Folger Adam, Locknetics/Security Engineering, Adams Rite, Simplex, Securitron, LCN Closers,

H.E.S., Arrow, Ives and many more. All products are not only backed by full manufacturer warranties but also by Monaco Lock's reputation and commitment to customer service.

Monaco Lock has become known for the large inventory it keeps on hand. In 1991 the company moved to a new facility that was built especially to accommodate its need for larger warehousing space. This kind of inventory allows them the ship order the same day they are received. All accessories and replacement parts compliment each product line.

The hallmark of Monaco Lock throughout the years has been its full line catalog. Now on its 8th volume, the catalog contains descriptions, charts, wiring diagrams and dimensions. The 600 page catalog is supported by the professional product knowledge of trained technicians with hands on experience and four full time locksmiths on staff. The sales team will assist you with questions on systems applications, product compatibility, and pricing. Confidence with your purchase is the number one concern. Also offered is an on sit repair department to help speed up any returns and avoid factory delays.

As locksmiths become more involved in electrical locking applications, its important to have one national distributor with not only the knowledge but the product that can be shipped daily coast to coast. Monaco Lock Company remains committed to providing courteous, reliable service at competitive prices.

**Circle 270 on Rapid Reply**

#### Northeast Lock Corporation

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**Circle 271 on Rapid Reply**

#### Orchard Lock Distributors, Inc.

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## Test Article #1 General Security

To be tested in March 1993 issue.  
Details in insert in front of issue.

# Corbin Mortise Lock

*"This article is part of our Security Certificate Program. In a future issue, the content will be tested."*

With the advent of the ADA laws, one of the more current and frequent services you may find yourself doing, is converting mortise locks from the standard knob trim to the lever trim. On more than one occasion I've seen the locksmith shrug his shoulders and tell the prospective customer they would have to order a whole new mortise set and trim.

The reality of the situation, however, is that most brands, including Corbin/Russwin, can be modified to meet ADA requirements through the use of new lever trim and/or mortise lock conversion kits.

Corbin/Russwin, in fact, have made the changeover easy. First, identify the series unit to determine the proper conversion kit, select the style of lever trim, then order.

While the need to change from the knob to the lever trim may be obvious, the need for a conversion kit may be less apparent. The answer, of course, is quite simple. Unlike the knob, the lever puts a great deal more torque and leverage on all working parts. The springs that were perfectly able to return a knob to a centered position are not capable of returning and maintaining a unit with the added leverage induced by the lever. To compensate, many manufactures have added extra and/or larger springs to support the lever demands.

The Corbin/Russwin conversion kit enables the locksmith to add the extra spring support to existing Corbin/Russwin units, without the need to replace the whole lock. Before we begin with a disassembly, however, let's take a look at how to identify the lock model and find the proper conversion kit.

To make the servicing easy, Corbin/Russwin locks have remained unchanged for the last 15 years (excluding trim), and, except for the part number and keyways, all parts are

identical between the two brands. The easiest identifier for these locks will be the Emhart emblem or logo embossed on the faceplate.

There are four basic series: the Corbin 9200/Russwin 4000 series for 1 3/8" thick doors. The Corbin 9500/Russwin 5000 series for 1 3/4" doors. The Corbin 9800/Russwin 7400 series that uses the larger master ring mortise cylinder. And, the Corbin 9700T/Russwin T7000 series used in detention applications. Excepting the Corbin 9700T/Russwin T7000, which uses a different style hub, all internal components are the same between the different series. The result is the need for only 2 ADA conversion kits. The model 435F22 for locks with moveable stops, and the 435F23 for locks with fixed stops.

The model 435F22 (see photograph 1) is used for all lock functions except the passage. The reason is that the



1. The 435F22 ADA conversion kit.

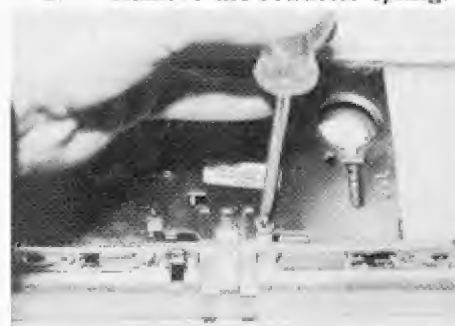
passage function does not require a stop (the bar that stops the hubs from moving and causing the door to be locked) with the knob trim. The knob is allowed to rotate in either a clockwise or counterclockwise position to retract the latch. The lever, however, is allowed to turn in only one direction (downward) to retract the latch. In order to prevent the lever from turning in the opposite (upward) direction, the fixed stops have been added. These stops do not lock

the door from either side.

Before beginning the conversion I made a mortise lock assembly block and appropriated Corbin/Russwin's *Mortise Lock Parts Manual*. This manual is an excellent resource tool for any of the Corbin/Russwin steel case mortise locks. A complete parts and accessories list as well as exploded views of the different assemblies are included. This manual can be obtained from any Corbin/Russwin distributor or direct from Corbin/Russwin. If this manual is not readily available, the instructions provided with the conversion kits are very clear and easy to follow.

To start, I put the lock body onto our homemade assembly block. While Corbin/Russwin have not normally "popped" apart while removing the cover, the block was simply used as a precaution.

1. With the unit in place, remove the 3 screws holding on the cover and slowly remove it. (See photograph 2 and 3.)
2. Remove the retractor spring.

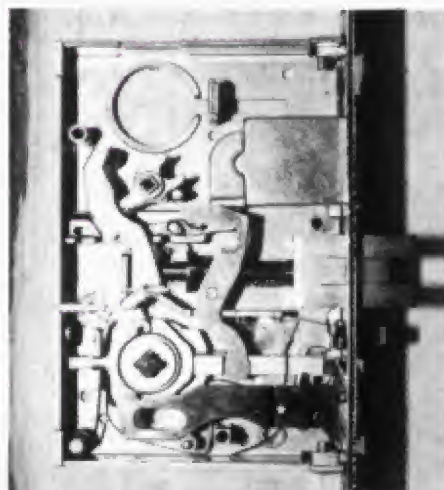


2. Removing the cover.

Be careful it does not spring off and get lost. (See photograph 4.)

3. Remove the retractor (see photograph 5). Because the edge of this part was caught just behind the toggle found in the faceplate of the lock, it was necessary to depress the latch. This allowed enough play in the retractor to move it away from the toggle and free

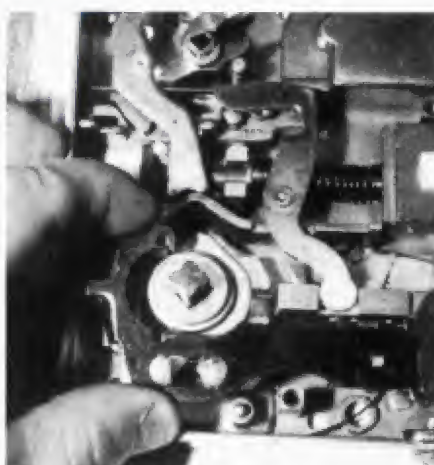




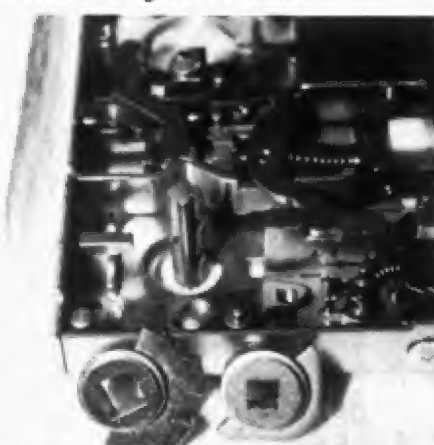
3. Inside the Corbin/Russwin mortise lock.



4. Removing the retractor spring.



5. Removing the retractor.



6. Old hubs not used in conversion.

from the case.

4. Remove the hubs (see photograph 6). You will notice in the photograph that the two hubs are different. One is the locking hub (the one with the large notch in the side) and is placed on the locking side of the door. The other is the non-locking hub and is placed on the inside, or non-locking side of the door.

5. With the hubs removed, the hub alignment bracket from the conversion kit is installed. It is held in place with two screws and a washer. (See photograph 7.)

In the conversion kit there are 2 locking rollbacks, 2 non-locking rollbacks and 2 hub and pin assemblies (see photograph 8). It is very important that the rollbacks are placed into the unit in the right order. The locking rollbacks will go to the side of the lock that will go to the outside or be locked. The non-locking rollbacks go to the side of the unit that is inside or does not lock.

6. Knowing how the rollbacks are going to be placed into the unit, place a hub and pin assembly into place with the pins towards the faceplate. (See photograph 9.)

Continued on page 32

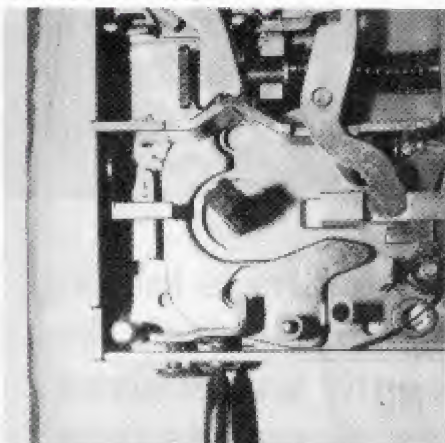
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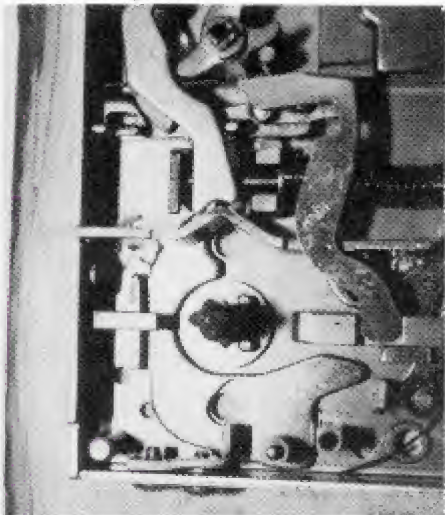
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7. Attaching the hub alignment bracket.



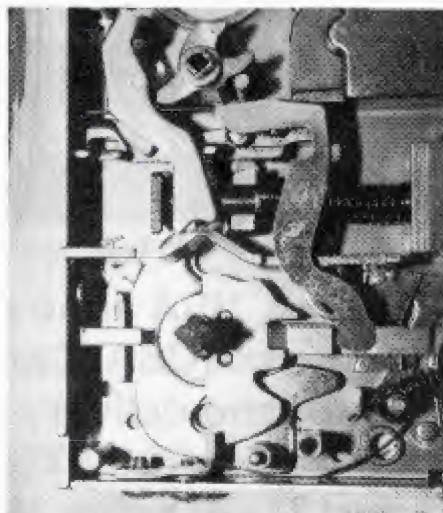
8. The rollbacks and the hub and pin assemblies from the conversion kit. Notice the differences between the top and bottom sets of rollbacks. The top set is for the locking side of the mortise lock. The other set is for the non-locking side.



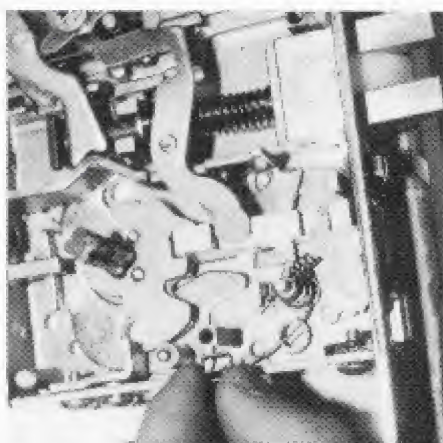
9. Putting the first hub in place.

7. Place the two match rollbacks onto the hub and pin assembly. The locking rollbacks were placed on this assembly first. (See photograph 10.)

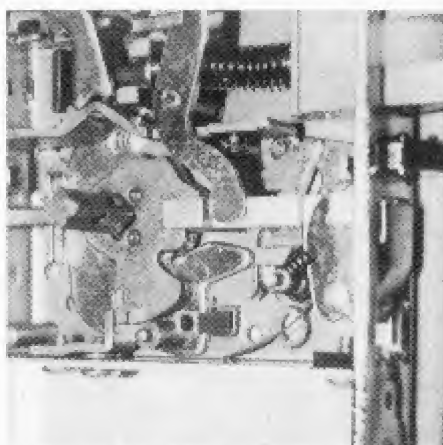
8. Place the spring spacer found in the kit over the square mounting post. (See photograph 11 and 12.)



10. Put the lock rollbacks down first.



11. This small square is used to properly space the auxiliary springs.



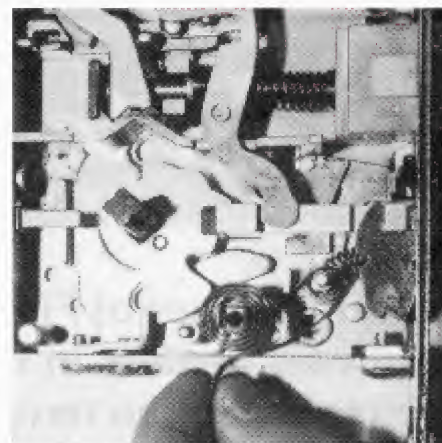
12. The spring spacer in place.

9. Take an auxiliary spring and place it on the square post, on top to the spring spacer. Make sure that the direction and position of the spring are correct. (See photograph 13.)

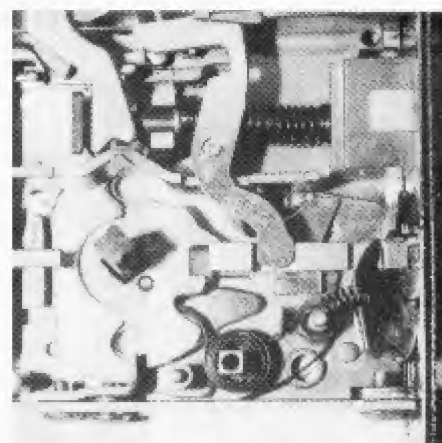
10. Roll the spring around until it engages with the rollbacks as shown. (See photograph 14.)

11. Insert the hub spacer as shown. (See photograph 15.)

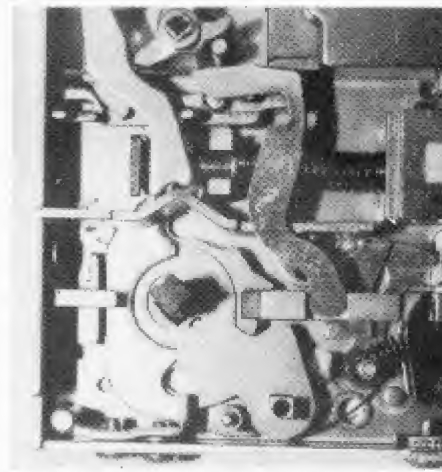
12. Install the other 2 matching rollbacks on top of the spacer. (See



13. Pulling on the first auxiliary spring. Make sure the position and direction of the spring is correct.



14. The spring in place.



15. The hub spacer in place.

photograph 16.)

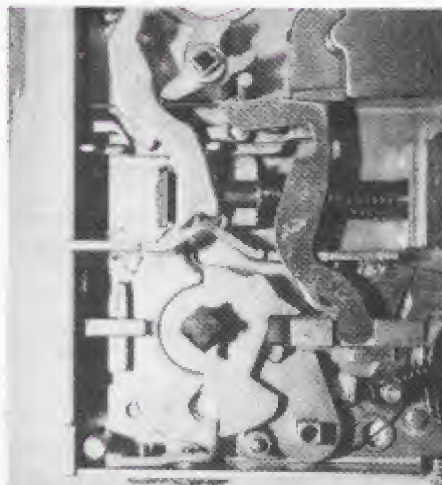
13. Place the other hub and pin assembly onto the rollbacks. (See photograph 17.)

14. Install the second auxiliary spring. (See photograph 18.)

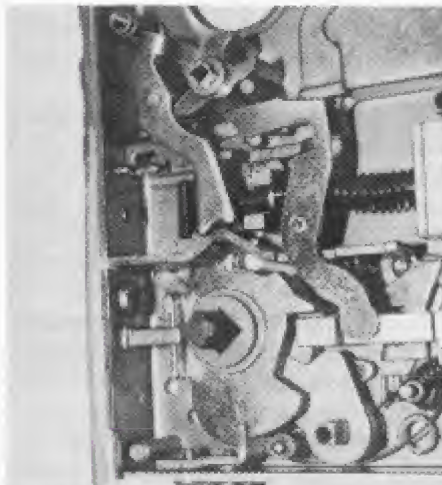
15. Replace the retractor. (See photograph 19.)

16. Install the hub lever spring from the conversion kit. This spring goes onto the same corner post as the retractor spring, but is below it and

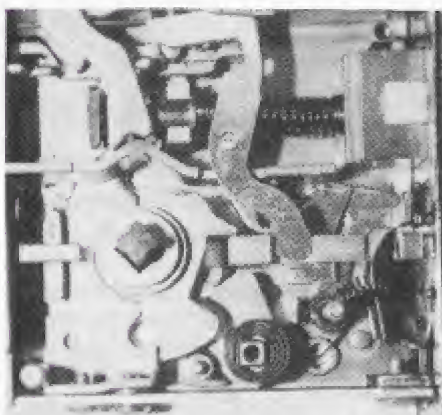




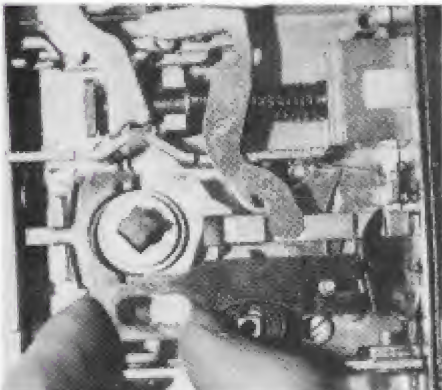
16. Putting other rollbacks into position.



17. Adding the second hub.



18. Installing the second auxiliary spring.

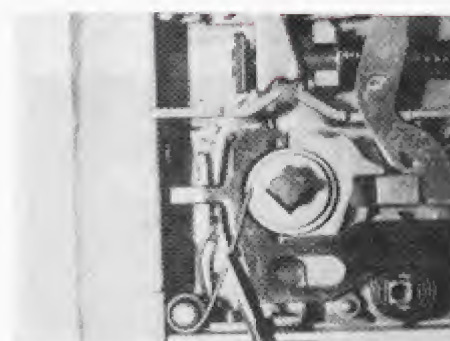


19. Replacing the retractor.



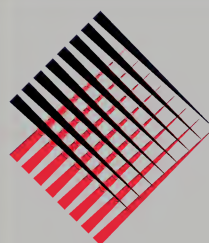
20. Installing the hub lever spring.  
applies pressure on the hub lever and  
not the retractor. (See photograph 20.)

17. With the hub lever spring in



21. Reinstalling the retractor spring.  
place, reinstall the retractor spring. (See  
photograph 21.)

18. Replace cover. §



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## Test Article #2 Automotive Security

To be tested in March 1993 issue.  
Details in insert in front of issue.

# Lexus By Progression

*"This article is part of our Security Certificate Program. In a future issue, the content will be tested."*

The Lexus, like other vehicles using high-security key systems, has followed the traditional path for key generation. First, "It's a dealer item only." Followed by, "It can be done, but..." Next is, "Impression it!" And, finally, "Progression it."

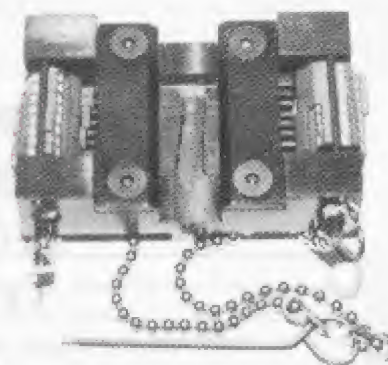
As way of review, the March 1992 issue of *The National Locksmith* had the first published article written on Lexus key generation. It involved modifying a keyblank to make the impressing process easier. Shortly before the publication of that article, however, I developed a method of progression that is not only easier it's safer. But before we begin, let's first look at some of the necessary equipment.

To cut the key, a sidewinder cutting machine will be needed. The Silca Club was used for this article. Due to the narrow nature of the key's center tracking the proper cutter and guide are necessary. Silca uses the TF22 cutter and guide. If a wider cutter and guide are used, opposite cuts may be cut away while moving down the tracks.

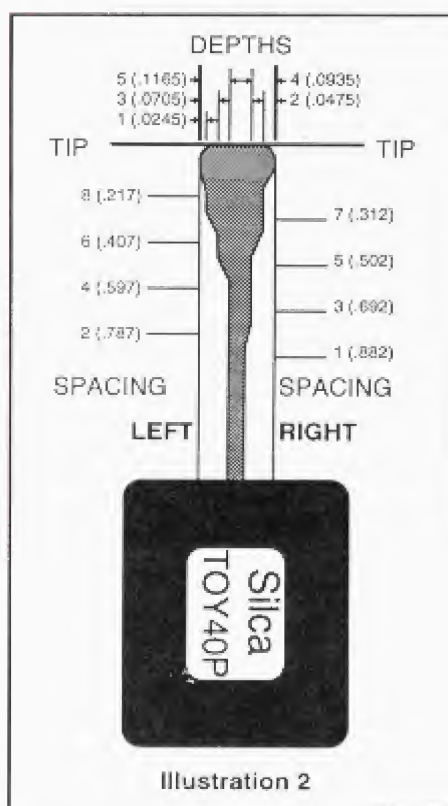
Finally, you will need a key guide or template. To date, there is no known source for guide-keys. Because of the center track cutting and the proximity of opposite cuts, manufacturers have refused to make them. One product that is available, however, is Silca's Lexus Key guide (part # D708165ZB). (See photograph 1.)

Silca's key guide is easy to use as the dial-in depths allow for constant viewing of the key's progression reducing the chance for error. This product will fit most sidewinder machines that have adequate guide clearance. Once you've chosen the equipment we can look at the key, tumbler and lock conditions that affect key generation.

The Lexus key is a four-track, sidewinder style, high security key. Unlike most automotive sidewinder keys, however, the cutting starts at the



1. Silca's Lexus key guide.



3. The Lexus wafers. Note the protruding bitting corner.

center of the blank and moves toward the outside edge. There are 8 spaces and 5 depths (see illustration 2). After having worked on several Lexus vehicles and viewed hundreds of Lexus keys there are only a couple of rules that apply to the key:

1. **Corresponding tracks are identical.** Laying the key down flat with the bow close to you and the tip pointed away, the left track from one side is identical to the left track on the other side as the key is turned over. The same is true of the right tracks.

2. **Adjacent cuts (MACS) cannot be more than 2 increments apart.** Adjacent cuts that violate this rule will encounter two problems. First, the land of the shallower cut will be partially or totally removed. Second, the slope created from the difference in depths will not allow the tumbler biting to smoothly follow the key blade, and in many instances cause damage to the biting.

3. **Opposite cuts, when added, will always equal 8 or less.** The tumbler biting is a small tab extending into the center of the tumbler that follows the channel or track cut down the center of the keyblade, and will ride on either the left or right half of the key. The channel, however, must be wide enough for the tab to pass through. If the fifth space on the right half of the key has a depth of 5, the cut in the same space on the left half must be 3 or less in order to give adequate space for the tumbler biting to pass.

Like other sidewinder styles, Lexus employees both whole and split wafer tumblers. The design of the wafer, while not unique to the lock industry, is unique to automotive application. In other sidewinder style locks the wafer biting is a corner protruding into the keyway. In the Lexus version, however, the biting is a small, square tab that extends into the keyway (see photograph 3). The biting is chiseled

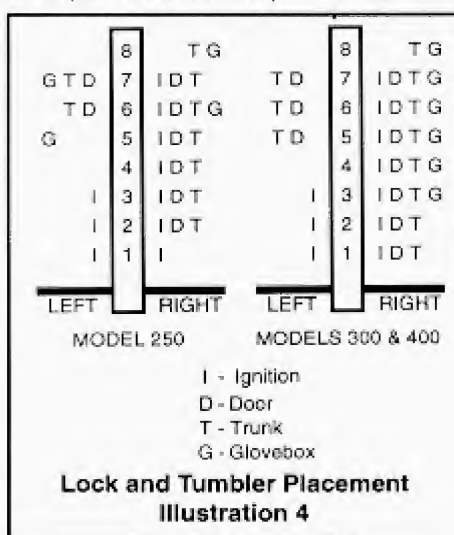


Continued from page 34

top and bottom, making it a very delicate piece. Because of its delicate nature, impressioning should not be attempted. Expect service problems due to these bittings wearing out or becoming damaged.

To date, I have found all wafers, both whole and split, stamped with the depth. There is no distinction between a right and a left wafer. What side of the key the biting rides on is determined by the design of the lock plug and placement of the wafer in the plug.

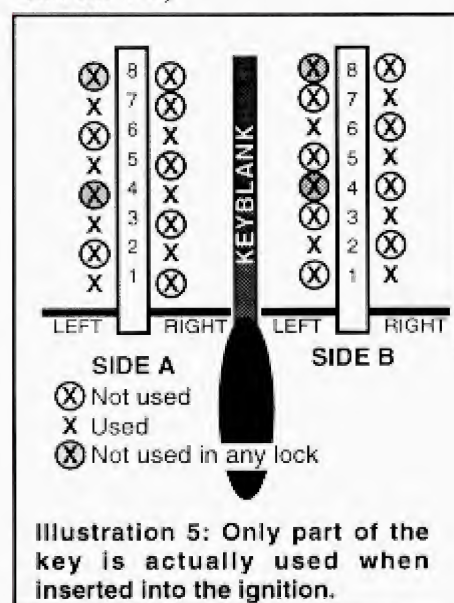
There are two progression procedures depending on the Lexus model. This is due to minor tumbler placement variations found between the model 250 and models 300 and 400. The major difference is the absence of a tumbler for space one in the 250's door lock. Even with this difference, only one more step has been added to the progression of the 250. (See illustration 4.)



The most complex aspect of generating a Lexus key is understanding how the key interacts with the tumblers in any given lock; be it the door, glovebox, trunk or ignition. A thorough understanding of this trait and a familiarity with the locks will make key generation easier. It is from their rather peculiar makeup that we formulate the progression process.

When a four-track key is inserted into a lock, tumblers will ride the left and right track on both sides of the key. Not all spaces of each track will be used, however. For example, the ignition locks of the 300 and 400 models use the first seven spaces of the key (bow to tip). Tumblers 1 through 3 are split wafers riding on

both the left and right tracks. Tumblers 4 through 7 are whole wafers riding on the right track. Due to the design of the plug, tumblers 1, 3, 5, and 7 will ride the right track on one side of the key, while tumblers 2, 4, and 6 ride the right track on the other side of the key. The same is true of the left tumblers. This means there are four sides of the key acting independently of one another (thus, the name "four-track"). The reason both right tracks are identical and both left tracks are identical is to create a courtesy key. If the tracks were to be cut only for the tumblers they affect, the key would only work when inserted the correct way. (See illustration 5.)



In creating our key, then, we are going to insert the key into our locks the same way each time. For the purpose of clarity we will label the key with side "A" and side "B". With the bow closest to you in a 6-12 o'clock position, and the tip pointing away from you, (as if the key had been inserted into a lock) side A will be on our left and side B on our right.

Illustration five shows graphically what spaces are used on the key as it is inserted into the ignition. Notice how the used and unused portions of the key, except for spaces 4 left and 8 left, alternate from side A to side B. You may also have noticed from illustration 4 and 5 that the 4 left and 8 left positions are never used. We can now add more guidelines to our process:

**4. Insert the key into the lock the same way at all times.** There are unused spaces on each track

when the key is inserted into a lock. Therefore, it is crucial that the key be reinserted into the lock in the identical position it was prior to removal for cutting during the progression. We will label one side of the key side A and the other side B as described earlier. To help keep track of which side is which, I file the top of the key head for reference.

**5. Spaces 4 left and 8 left are not used.** In all the Lexus vehicles I have examined, these spaces were never used. This allows us to automatically start these at a 3 depth. The 3 depth in these positions will allow all possible combinations for adjacent and opposite cuts without interference.

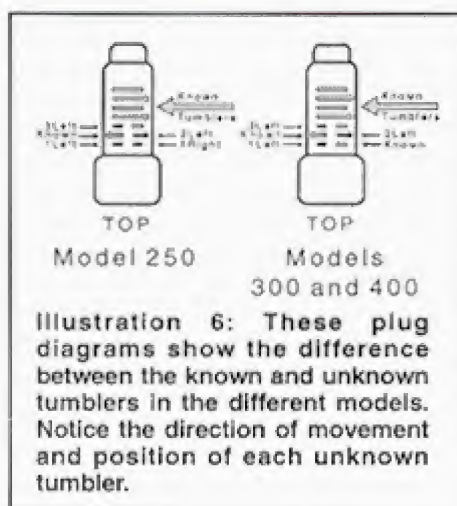
Now let's spend a little time on the ignition. The ignition will be the lock giving us the most problems. It holds the highest number of tumblers to be progressed, and the only way of removing it without damage is with an existing key (kind of defeating the reason for generating a key). In all models positions 1, 2, and 3 have split wafers. Referring to the tumbler placement chart (see illustration 4), you will notice that the only tumblers not revealed by other locks are the 1 left, 2 left, 3 left and 4 right on the 250, and the 1 left, 2 left and 3 left on the 300 and 400.

We now have a choice! Progression all four ignition tumblers on the 250 means we have a maximum of 625 different possibilities or keyblanks and an unknown amount of time in order to complete a key. Progression the three ignition tumblers of the 300/400 has a maximum of 125 possibilities or keyblanks. (These figures do not include the elimination of keys that violate the MACS or opposite cut guidelines specified earlier. Regardless, the number of possibilities and the amount of time is still beyond reason.) Or, dissect the ignition to determine if there are any unique features that allow us to shortcut the process.

The following illustrations will help us understand the joint operation of the remaining, unknown tumblers. Known tumblers are not represented in these illustrations.

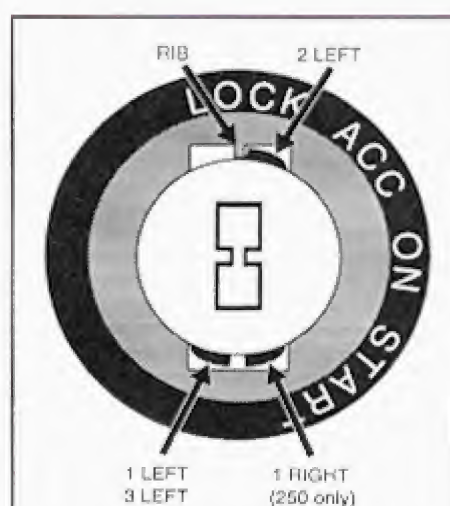
Notice in illustration six that the only difference between the model 250 and the 300/400 is the 1 right tumbler. Unlike the 300/400, this tumbler is not present on any other lock in the 250. This simply adds





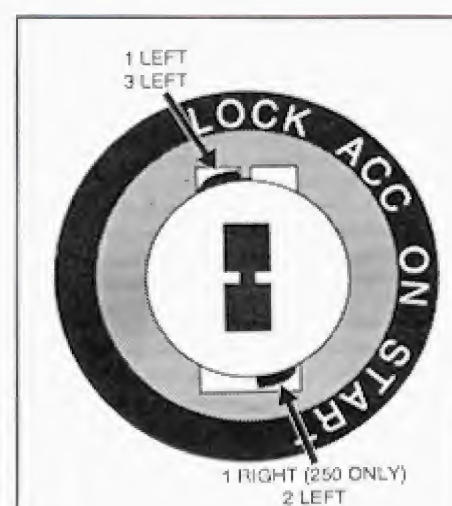
another step to the 250 progression process.

Also, observe the direction and side of the plug each tumbler is on, this will be critical in determining the half and side of the key the tumbler rides on. Finally, notice the cylinder (see illustration 7). The top tumbler ward has a small rib that plays an important role. This rib goes back as far as the fourth tumbler (further observation reveals that the fourth tumbler, a whole wafer, has a slot in the top of it to accommodate this ridge. The first three tumblers are



split wafers and rise on either side of the rib).

Look at the position of the tumblers as they appear in the cylinder without a key inserted (see illustration 7). The objective is to create a key that will position these tumblers such that they can be progressed either singly or in



pairs. This can be accomplished by using the rib and dividing the tumblers to the upper left and lower right tumbler wards. Because there is no rib at the bottom, once the tumblers on the left are progressed, the plug will turn slightly. (See illustration 8.)

Our progression sequence can now



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be set up. The tumblers seen in the top left ward, abutting the rib are 1 left and 3 left on the A side of the key. The tumblers in the bottom right ward are 1 right (on the 250 only) and 2 left on the B side of the key. The sequence goes as follows:

**6. Progression positions 1 left and 3 left.** Using standard progression methods, progression these spaces on the A side of the key until the plug turns to the "ACCESSORY" position. *Do not force it further or damage will result.* (See illustration 9.)

**7. Progression 2 left.** Progression this tumbler one increment at a time on the B side of the key. For models 300/400: progression until the plug turns to the "START" position, the key is finished for these models (see illustration 10). For the model 250: progression until the plug does not turn to the "ACCESSORY" position (see illustration 10). The last cut allowing the plug to turn is the correct cut. Go to the next step for this model.

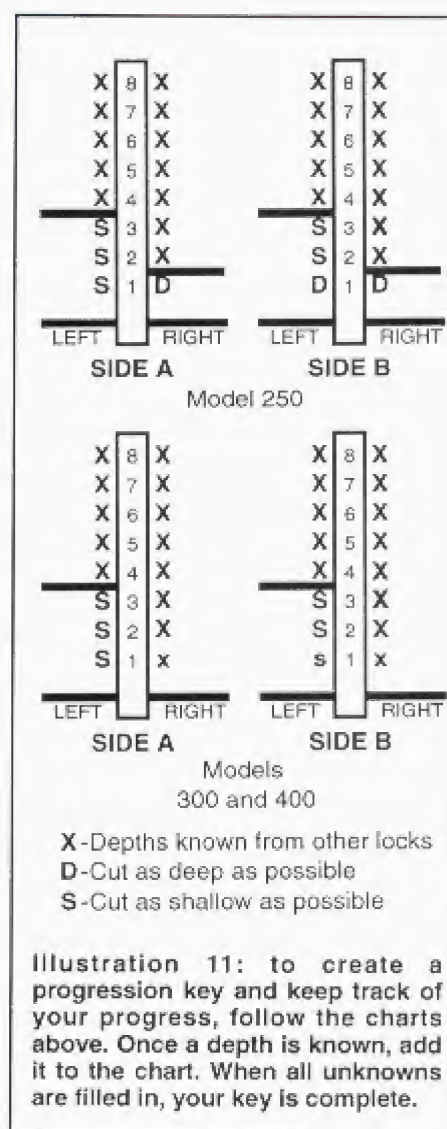
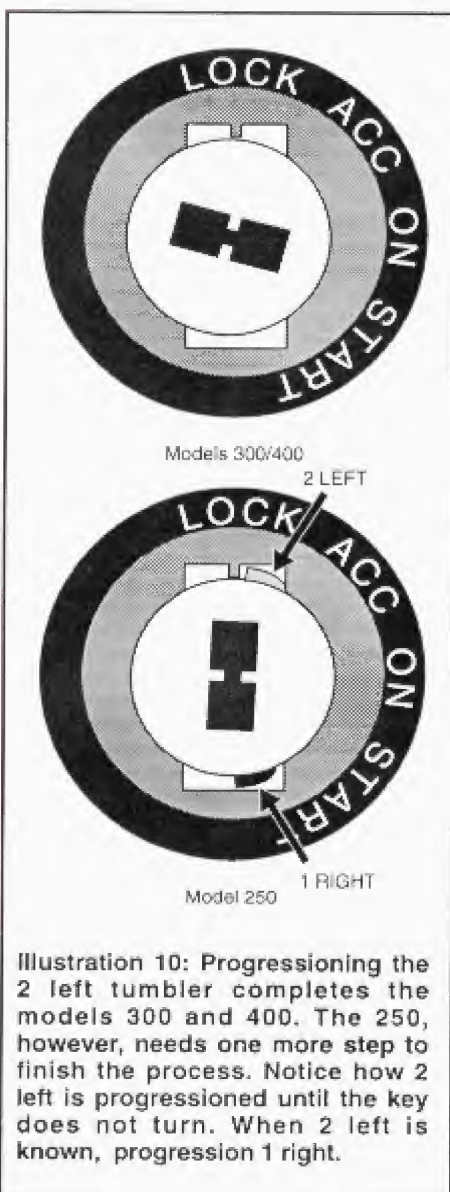
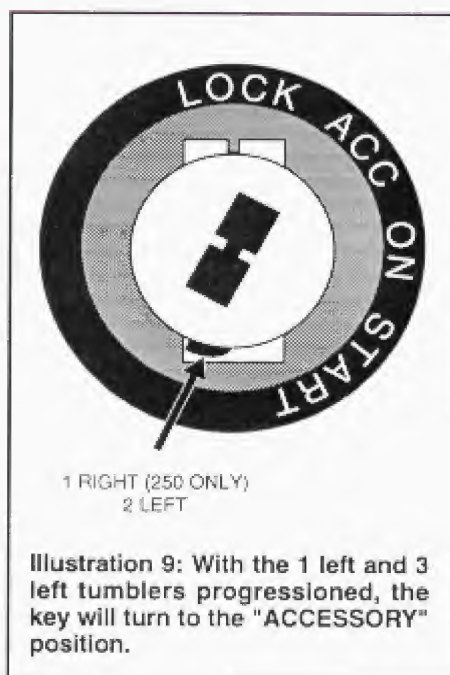
**8. Progression 1 right (Model 250 only).** Progression this position one increment at a time on the B side until the key turns to the "START" position.

Now that we know the sequence for progression the Lexus ignition, how do we accomplish the task of setting the tumblers into the proper position through the use of a progression key?

The answer, here, is to create a *progression chart*. This chart will help us make the starting progression key and let us map our progress. Because the 250 and 300/400 are different, we will make two different charts (see illustration 11). In setting these charts up it is critical that you follow all the previous guidelines; especially those regarding MACS and opposite cuts. Following the guidelines will eliminate half of the possible key probabilities and reduce the amount of work you'll have to do.

Begin by finding all the space and depth information from other locks on the vehicle. Put these into the places marked with the "X" on our chart. Remember, the left and right halves of the A side are identical to the left and right halves of the B side, fill in the X's for both the A and B side. Also, remember that 4 left and 8 left are automatically a 3 depth.

Once the known depths are



completed, fill the spaces for the unknown depths. Where there is an "S" make that cut as shallow as possible. Where there is a "D" make that cut as deep as possible. Whether you are filling in an S or a D it is imperative that you follow the MACS and opposite cut rules!

Now, cut your first key to the chart you just completed and begin the progression process:

Key generation for the Lexus 300 and 400:

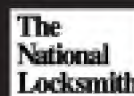
1. Obtain as many cuts as possible using the door and glovebox locks or the trunk lock if accessible. I prefer the trunk lock because all the possible known depths can be found here. Record all the depths onto the progression chart for models 300 and 400. This leaves 1 left, 2 left and 3 left as the unknowns.

2. In order to properly position the tumblers for progression, fill in the unknown positions on our chart following our guidelines. Then cut the





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progression key on both the A and B side.

3. Progression positions 1 left and 3 left. The progression for these tumblers will affect the A side of the key only. As these spaces are progressed, only the A side of the key will be cut. Do not alter the B side!

In progression these spaces it does not matter which tumbler is used as the constant and which is used as the progressor, *as long as you remain consistent throughout the process!* If 1 left is to be constant, cut 3 left one increment deeper, trying the key after each cut. If you go through all the possibilities for 3 left without the key turning, using a new key, cut 1 left one increment deeper and progression the 3 left position again. When the key turns to the "ACCESSORY" position (*do not force it further*) record the cuts for the 1 left and 3 left position on our chart, make these cuts onto the B side of the key, and use this key to begin the 2 left progression.

4. Progression position 2 left. This space will be progressed on the B side. Do not cut the A side!

With the 1 left and 3 left depths known, adjust the 2 left depth to meet our guidelines if it is necessary. Insert the key into the ignition and turn. If it does not turn to the "START" position, cut 2 left on the B side one

increment deeper. Continue this process until the key does turn.

Key generation for the model 250:

1. Obtain as many cuts as possible using the door and glovebox locks. Record all the depths onto a progression key chart for the model 250.

2. In order to properly position the tumblers for progression, fill in the unknown positions on our chart following our guidelines. Then cut the progression key on both the A and B sides.

3. Progression positions 1 left and 3 left. Follow the same procedure as stated for the 300/400 model. *Remember, do not turn past the "ACCESSORY" position.*

4. Progression position 2 left. Follow the same procedure as stated for the model 300/400. Unlike the model 300/400, however, you will cut this position until the plug *does not turn*. The last cut allowing the plug to turn is the proper depth. Record this to the chart.

5. With all the positions known except for 1 right, cut a new progression key with the 1 right position as shallow as possible on the B side of the key. Cut this position one increment at a time till it turns to "START". Record the cut on the chart and cut the A side to match. §

## Open Letter From Printz

by Hank Printz

When I was elected to the Presidency of The Associated Locksmiths of America (ALOA) one of my goals was to remove some of the barriers that seemed to exist between ALOA and the various voices of the industry. To date that goal has been elusive, but I believe it is becoming attainable. Another goal was to increase the membership of ALOA to a level where it can have some impact on the public and can make a difference in our lives. I am pleased to be able to take a step towards both goals with this article.

ALOA is the largest locksmith association in the world and with approximately 10% of our members living outside the USA is truly an international association. The association (which will hopefully pass the 10,000 member mark before the end of the year) is striving to improve the image of locksmiths and their profession. Although 10,000 is a respectable number it is not enough to be as effective as we would like. Therefore ALOA has been on an active and very successful membership drive this year resulting in over 1,200 new members to date.

Why are they joining? There are many reasons and I'll try to list a few.

First let me assure you that ALOA does not want you 'just for the dues'. Dues are a necessary evil, so that we can provide members with membership services, but we try to keep them to a minimum.

The most important thing we do for members is the education provided through our annual trade exhibit and the

*Continued on page 96*



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### Test Article #3 **Electronic Security**

To be tested in March 1993 issue.  
Details in insert in front of issue.

## Intro To Access Control

*"This article is part of our Security Certificate Program. In a future issue, the content will be tested."*

**B**y the year 2000 over 200 million dollars will be spent on access control. In fact, compared with other areas of security, access control is growing at an exponential rate. And the only thing stopping a locksmith from taking his portion of that money is his perspective of locksmithing.

There are two genres of locksmiths: the pure locksmith and the security locksmith or professional. Both are valid and viable positions. Both hold a necessary part in today's work place. Unfortunately, only one group may be able to survive the many changes in today's security market.

The pure locksmith, as the name implies, and in the strictest sense, deals only with locks and locking mechanisms. What the lock is attached to and what the lock protects are of little interest. Should a customer need more protection, more and bigger locks with high security keys is the answer; irrespective of ancillary conditions (e.g. door and frame condition, interior and perimeter protection, lighting, fire, etc.).

The security professional, on the other hand, encompasses a much broader understanding of the trade. Locksmithing is viewed as a small part of an even larger picture, namely - security. When a customer wants more protection his initial response is to

survey all the current conditions that may affect the customer's personal and physical interests. This includes not only locks, but doors and windows, primary and secondary levels of security, lighting, fire hazards, alarms, the neighborhood, recent crimes in or around the area, etc. Again, there is nothing erroneous with either perspective. They both have legitimate positions in the field of security. The advantage with holding a larger view of locksmithing, however, is, quite simply, income potential.

Over the last few years I've had the opportunity to witness the effects of our changing society on companies holding these different perspectives. Two particular companies I have associated with are very competent at locksmithing. Only one of these companies, however, makes door and frame replacement and repair, door closers and door hardware, alarms, electric strikes, CCTV, etc. a part of their normal business. The other company considers this to be little more than "handy-man" work, and refuses to expand his services beyond openings, making keys and installing and repairing locks.

The down-to-earth result is revealed in the first company having doubled in size over the last year, while the second can't make an honest living.

It's understood that these are two extremes. Most locksmiths will slide on a scale from one end to the other, with most being positioned just center. But there needs to be an ever present appetite for grasping the larger view of locksmithing.

One of the major functions of the locksmith is "control." When a customer wants a rekey or a new lock installed he is really asking for more control. Master keying, the locksmith's essence, is simply an intricate form of control. Repairing a door that does not latch is re-establishing control. Making a key for a door or car is establishing control. Putting a fence up is establishing control. Putting in an electric strike is establishing control. There are numerous ways a person can administer control. And, while it is not customary for a locksmith to put up fences, there are still numerous methods of control that involve the locksmith.

For instance, a nearby hospital was losing excessive amounts of property due to employee theft. To solve the problem they wanted to have "more control." If left up to the "pure locksmith," rekeying and adding locks to the affected area is the solution. To the security professional, however, there are several ways to approach the

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Continued from page 40

problem, rekeying and installing locks being part of it. But before a method (and in some cases, methods) of control can be prescribed the locksmith must analyze all factors pertinent to the problem.

Analyzing, while not difficult, does require both time and knowledge. Often the simplest problem will have unknown elements that will affect the solution. Following a simple outline will help.

**First, define the exact problem.** The clearer and more precise a problem is stated and understood, the more definitive the solution. If there is more than one problem, isolate and list each one.

In the hospital case, employee pilfering was only one of many control problems that they had tossed into the same basket. The initial meeting with hospital personnel revealed that video equipment was missing from a closet at one end of the hospital, drugs were missing from the pharmacy at another, and aerobics equipment was missing from physical therapy in still another part of the hospital. To add to the confusion, each of the people involved had their own solution to the problem(s); from rekeying to keypads,

from an access control system to CCTV, from high security locks to alarmed exit devices.

Second, what is the **scope of the problem**. What exactly does the problem encompass; the who, what when, where and how. Get all the information possible regarding the problem. Include the current system. If they have a master key system; how old is it, who is and has handled it, can unauthorized duplicates be made; are alarms or monitoring devices present, are they operating properly, who controls these devices and how. How is the building laid out, where are the exits, hallways, closets, etc.? There are thousands of questions that need to be answered, keep your eyes and mind open.

With the hospital we were able to deduce the "who" as the employees of the different departments that had or needed keys; the "what" - various pieces of light and carriable equipment; "when" - after hours; where - from both open areas and locked closets; "how"- using keys and exiting out unmonitored, secluded exits. These deductions were not reached without taking a thorough walk through each area, however.

Visual inspection of the site(s) is a

requisite for any competent locksmith. Blueprints or floor plans are very helpful, and can be used for notes as the inspection is being done. To neglect or avoid this part of the job can severely limit or handicap any overall solution(s).

So, while it was bothersome for all involved, we went and examined all the areas affected. We noted hallways, exits, unlocked rooms and closets. We determined who had keys to what areas and why they were allowed access. In fact, we carefully considered the effectiveness of the current master key system; noting its age, who controlled it, and the ease of unauthorized key duplication. Most interesting in this case is that we were not concerned with access problems, instead we were concerned with egress. This, of course, is a whole different animal, demanding different and unique solutions.

**Evaluate.** The third step in our process. This is the point where a locksmith's knowledge of the situation and of the security field will be tested. It is an open book, demanding a lot of organizational skill as well as a lot of imagination.



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This stage of the process requires organizing all the details of the job into a larger, clearer perspective of the problem. Once done, it's time for the imagination to take over.

The locksmith needs to sit back and ask, without regard for what already exists, how can this problem be solved? If I were to create a whole new product, specifically for this job, how would it work, what are its parts, what would it be? Once this imaginary solution is devised, break it into pieces. Generally, there is a product, or a line of products that will fit each one of these pieces. The locksmith's knowledge is critical here. He needs to know product and know them well. Two brands of access control systems may seem to offer the same solution, yet slight variations in operation, functions, and upgrades of one may better suite your customer.

This part of the analyzing process can be very time consuming, even when there is a good working knowledge of available products and their capabilities. One rule of thumb here, it's good to be real familiar with a couple of products, but do not rely on them only. Learn other products, mechanical and electrical.

The final part of the process is to **formulate conclusions**. Do not limit this to just one (unless the job is extremely simple). Present them to your customer in report form. Include a statement of the problem(s), areas that affect the problem, and a summary of the thought process behind the conclusions. Give the conclusions and your recommendations as well as approximate pricing should they want to implement any of them. Include catalog or cut sheets of the different products you're suggesting the customer implement. Show long term maintenance costs, explain the advantages and disadvantages of each conclusion and how one effects the other. Then sit back and let the customer decide.

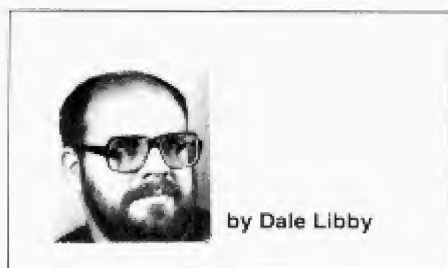
The conclusions in the hospital case? They were presented to the hospital board in a 17 page report. It covered solutions from CCTV to rekeying locks. Because it was an egress problem, careful consideration was given to ADA and NLS standards and local codes. While they did not utilize all of the recommendations, they did accept those that most easily fit into their budget. The video closet was rekeyed using a restricted high security key way, the pharmacy was

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by Dale Libby

## LaGard Explained

*"Here is a blow by blow description of the electronic lock that is used on many safes today."*

Everyone is talking about the LaGard series of push button locks. In one manner this lock poses some interesting retrofit possibilities, and in another way, some interesting servicing procedures. I plan to talk about something that caused me to change a perfectly good lock with another perfectly good lock, for neither the customer nor I knew about the little quirk in this electro-mechanical lock.

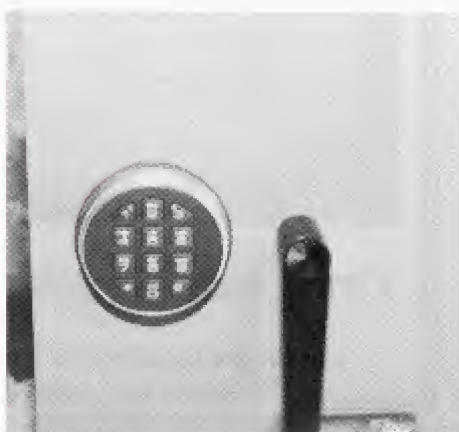
I do not plan to get technical about this lock, for other than changing the hand of the bolt, there is nothing a service person can do except change the two alkaline 9-volt batteries under the key pad. In fact, on the back of the combination lock is a warning that states "Sealed Unit, Breaking Seal Voids Warranty".

Servicing this lock has been covered in other articles in this magazine in past months.

Photograph one shows the outside configuration of this U.S. Steel container box. There is a keypad and a handle. There is a detent mechanism on this safe that keeps the bolts in the 'thrown' position when the door is open. The handle turns counter-clockwise to open and throw the bolts.

To change the two batteries, it is necessary to remove the keypad. This is done by pushing the keypad up with a gentle but sharp slap of the hand (see photograph 2). The two mounting screws that hold the pad in place are in the same position that a regular combination lock would use to hold the dial ring on. Unplug the old batteries and plug in the new ones. Then just push the pad back on the two mounting screws and the job is done. That is about as much as you can service on this lock.

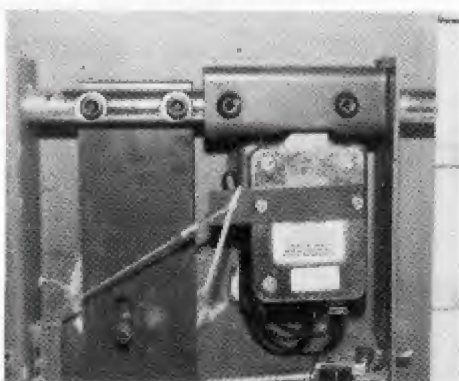
The operation of the lock is easy and straight forward. There are no turns or rotations to worry about. Just



1. The U.S. Steel container box.



2. Keypad removed to change batteries.



3. The inside location of lock (VU).

punch in the correct 6 numbers, there is a beep, and then the handle can be turned to withdraw the dual locking bolts. Presto, the safe is open. A child can do this. (Or someone with only the intelligence of a child. This is where the problem comes in as I will

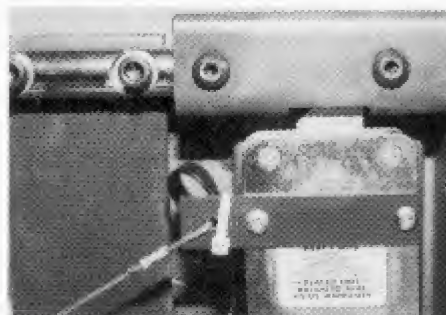
shortly discuss.)

Photograph three shows the inside location of the lock (vertical UP), the two horizontal bolt bars, the connecting bar, the detent mechanism (at the bottom of the photo), and the relock attachment and wire. A bar across the back of the combination lock secures the relock cable. If the lock was somehow punched, it will allow the wire to go slack.

When the relocking device is set off, a spring loaded plunger shoots into a hole in the lower bolt bar, effectively relocking the safe door. It would then be necessary to either drill for the relocker directly at the point it enters the bar or drill to hook and pull the wire. I have not had to drill one of these containers, yet, so I will keep you advised as to the best procedure.

A close up of the swing bolt is shown in photograph four in the locked position. Movement to the left is stopped (as seen in this photograph) when the combination lock is locked. When the correct numbers are punched in and the unit beeps, the bolt can be moved (via the handle) to open this container (see photograph 5). Simple and rudimentary. What can go wrong? The safe and lock are excellent. The people (children) working the lock are stupid.

There are some people that rattle a



4. Close up of the swing bolt (locked).

Continued on page 46



# Major

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door after locking it for about a



5. When the correct number is entered, the bolt can be moved to open the container.

minute. They cannot see that if the bolt is thrown, the bolt is thrown, on a properly working deadbolt or lock. I almost never do this. Here was the problem. A person in a large chain of shoe stores had one of these safes, and complained to the manufacturer that the unit would not lock consistently.

The manufacturer called me to service and replace the 'defective' combination lock. The problem was that when the door was slammed shut and the handle sprung to the locked position, it could again be opened 'instantly'. This means in less than one second.

There was nothing wrong with the safe or LaGard Combination lock. This lock is an electro-mechanical lock, and not a mechanical lock. There is about a two second delay from when the bolts and handle spring back before the combination lock is fully secured. Now I had to explain this delay to the customer in a way he would understand.

I replaced the lock and told the customer that there is a built in safety factor of two seconds for his benefit. After closing the safe, I told him to count to three before rattling the safe handle. This was to double lock the safe. (Semantics!)

After he started to do this, he was amazed that the safe locked *every* time. There was nothing different except in his understanding about the unit. Before working on this lock, I did not know that there was a delay factor involved.

If you work in these safes, you can actually hear when the interior solenoid is springing back to stop the swing bolt from moving. It is not instantaneous. These are very interesting locks and appear to be the wave of the future. Open and Prosper! §





by Jake Jakubowski

## ...All Others Pay Cash

*Cash flow and collections can be one of the most aggravating aspects of owning a small business."*

**I**n 1972, I purchased a service company that appeared to have a tremendous amount of potential. In addition to the firm's apparent potential, there seemed to be an above average cash flow position that would allow me to pay for the purchase of the company with a portion of the company's own earnings. Since the price was right ... I signed on the dotted line.

**Three months later**, my accounts receivable totaled about 87% of the first three months gross! It seemed that each of the service people felt it was easier to say, "Sign here, please.", than it was to ask for payment. So, here I was with an amount seemingly

approaching that of the national debt and I had to go to the bank to borrow operating capital! The truly ridiculous part is that, in the majority of instances, my service people actually *turned down cash* by deftly saying, "Nah! That's O.K., the office will send you a bill".

**Not only was I not getting the cash payments I should have been getting**; I was paying interest on money that I should not have had to borrow. And, to add insult to injury, I had to pay a bookkeeper to send out statements to collect the money that the service people should have collected when they completed the job!

It did not take me long to realize that I had made a serious error in not instructing my service people in the fine art of collecting. It required another six months of *concentrated* effort to bring that company's receivables position to an acceptable level!

**In an ideal business environment**, you perform a service for an individual or business, and that individual or business pays you for that service. You know, the good old C.O.D. (Cash On Delivery) precept. Since few, if any, of us operate in such an economic paradise; we will discover that any service oriented business will find it expedient to

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extend credit to a certain portion of our clientele.

The trick is being able to keep that credit within acceptable limits. The only way you can maintain a manageable (and by manageable, I mean both the 'age', or collection time, and dollar amount) accounts receivable, is by beginning *at the beginning*. Otherwise, you could be letting yourself in for a great deal of strain and aggravation, simply because you did not have a clear credit policy from the "get-go"!

For example, a clothing store in a strip center calls you to rekey their doors and change the combination on their safe. The manager asks how much you will charge ... you quote a price that is acceptable and set a time to do the job. After doing the agreed upon work, you make out your invoice and tell the manager that the total is "x" amount of money. He, or she, tells you that they will have to send your invoice to their "home office" for payment. You may, or you may not, get your money. Let's assume that you do not.

So, you go back to the store (after about 45 days), and find that there is now a new manager. That manager

tells you that they are not aware of the previous invoice, but will be glad to talk to their supervisor about it. After, another trip to the store, the new manager tells you that you will have to submit another invoice to "the home office."

Sixty, or ninety days later, you still have not received your money, and the store manager disclaims all responsibility. You finally call the "home office", which is 27 states, two mountain ranges, and one major river away. The "home office" tells you that they have no "record" of your company doing any work, and that they have not received any invoices from you. They might even tell you that the previous manager did not have the "authority" to have the work done. The phone call(s) cost you another \$27.50 ... and you didn't even get a kiss!

Sure, you can take them to small claims court. You can have your attorney write them a letter. You can turn it over to a collection agency. You could even throw a brick through their plate glass window. Unfortunately, all of those remedies may be more costly and aggravating then practical. Why? Because any

attempt at collection (or revenge) could easily cost you more than you are owed. Especially, if the amount owed is under \$100.00.

Again, "Why?". In small claims, even if you sue for the amount owed, plus fees and expenses, you may not get it. If the company's "home office" is out of state, small claims court may not be an effective remedy. Your lawyer will probably charge you nearly as much to write the one letter as you are owed. A collection agency will most likely want 50% of what they collect, if anything. Throwing a brick through their window is definitely a no-win situation. Which doesn't leave you much in the way of options ... maybe you should just forget it!

You might reply to that by saying something like: "The money doesn't really matter, it's the principal of the thing!" Sounds good. But, like my dear, old, grandma used to say, "Principal, schmincipal. It's the money that matters!". I'm not saying that you should not try to collect money that is owed to you... I am saying try to *keep* from getting in the position where it becomes necessary to start collection proceedings!

*Continued on page 51*

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Continued from page 49

How do you keep yourself from getting into that kind of position to begin with? By beginning at the beginning. Among the first things you should do when you decide that you are going to start your own locksmithing business, is to determine *your own credit policies*. That is, who are you going to allow to "charge"? What criteria will you use to determine a "good" risk from a "bad"? Under what "terms" do you expect payment? Above all, determine how much credit *you can afford* (i.e., how much money can you afford to lose?) to extend! Remember, you have to pay for the materials, supplies and operating expenses, associated with the job(s) whether your account pays you OR NOT!

It is not easy to determine "who" you should extend credit to. Or who is a "good" or "bad" risk. Both aspects require a goodly amount of common sense, and luck. Determining "who" you should not extend credit to is a little easier. Here are a few general observations:

- You should never give credit to any company that has the adjective "HONEST" in their name. The chances are they're not.
- Rental agents that tell you they can't pay you until they collect the rent from the tenants. The chances are they won't.
- The business person that wants you to send the bill to "the landlord", or a third party. Don't, unless you get authorization (preferably in writing) from the third party. Then, proceed with caution.
- Any potential customer that says, "If our purchase order is not good enough for you, we'll get someone else!". Let 'em.
- ANY person that calls you to open their car and wants to "pay you Friday". Most likely, they won't.
- The business person that tells you, "the only way we pay our bills, is by check, on the tenth of each month". They probably don't.
- Any business person that says, "Hey, do I look like I would beat you out of a few, measly, bucks?". They probably will.

Someone, somewhere, once said, "If it don't feel good ... don't do it!". In the context of extending credit, I interpret that to mean: "Listen to your instincts!".

Although it is not carved in stone,

and there are no hard and fast guarantees, credit worthy accounts might be banks, *major* chain operations (stores, restaurants, etc.), governmental bodies (Federal, State, County, Etc.), law enforcement agencies, and well established commercial and industrial facilities. Again, trust your instincts and do a little checking before extending credit.

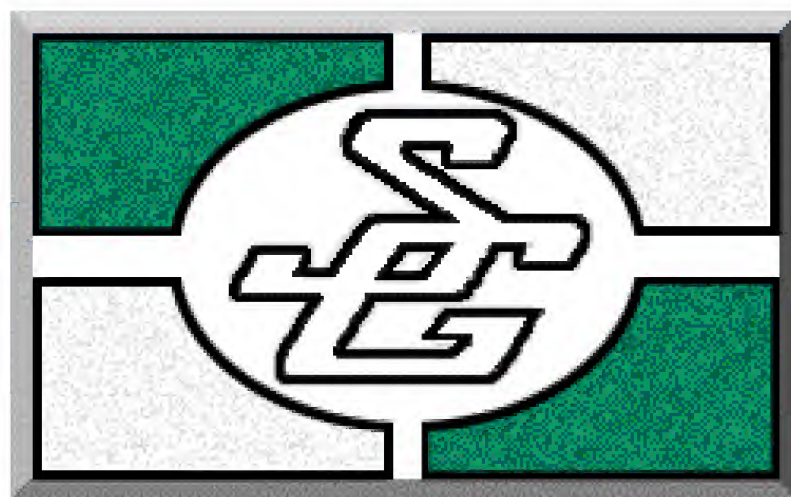
When a prospective customer calls and asks for an estimate for work, give them the estimate, set up a time to do the work, and don't be hesitant about telling them that you "get paid when you complete the work"! If they tell you that the invoice has to be sent to the "home office" for payment, determine whether, or not, you are prepared to lose that money. Ultimately, it is you that has to make the decision to extend credit. Make it as wisely as you possibly can.

Some of the factors you may want to consider are, how much business will you get from that company over a period of time? Is that business worth any potential collection problems? What have you *heard* about the firm? Good, or bad? How badly do you want that company's business? What are your instincts trying to tell you?

If necessary, go down to the local library, and ask to see the Dunn and Bradstreet reports. Ask your own banker what he, or she, can tell you about the company. Whatever you do, *do not assume* that just because they are large, or have a number of stores in various areas, that they will pay you without a problem, or hassle. In fact, approach any potential credit extension with a certain amount of skepticism ... and the thought, "what if they don't pay me?"

Also, keep this in mind: if you take your favorite person to a restaurant for dinner, you have to pay for the meal in either cash, or by credit card, before you leave. If you go to a fast food operation, you generally have to pay *before* you get your food. If you stop at a motel for the night ... cash, or credit card. Ditto for a car rental. The grocery store requires cash. The same for the gas station. The jewelry store, department store, and the washing machine service technician, all require cash, or credit card. Try telling any of the above, "Just send me a bill."!

Remember this: with very few exceptions; "In God we trust, *all others pay cash!*" §



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## Safes

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Ambassador offers a combination of 40 years experience in the lock and safe industry to any dealer who needs help in selecting the proper safe for their customer, or to the dealer who is interested in generating new sales and extra income.

Ambassador was started in 1989 to

bring to the Locksmiths and Safe dealers a quality fire safe at a reasonable cost that can be sold at a profit with complete confidence. We offer a full lifetime warranty, and we mean it!

Although our principle warehouse is located in New Jersey, we have many distributors throughout the country from which our safes are shipped to dealers in their area, helping to speed our products to the dealer and provide lower freight costs on small orders. With our free freight program on larger orders, which was introduced this year, the dealer has an option to obtain a better profit margin with larger orders.

For your convenience, our toll free 800 number has been expanded to include Hawaii, Canada and Puerto Rico. Please feel free to indulge in the knowledge of our in house sales staff and our areas sales

representatives. We are confident in our ability to meet all of your safe needs.

**Circle 272 on Rapid Reply**

### Cannon Safe Inc.

Cannon Safes is one of the largest manufacturers of security safes in the U.S.A. With over 30 years of experience behind them, Cannon is one of the few complete manufacturers in the industry. They produce their safes through every step from beginning to end from their 34,000 square foot plant located on 1 3/4 acres of land in Pico Rivera, California.

All Cannon Safe products are produced 100% in the U.S.A. and come with a lifetime guarantee; a one-year guarantee on the lock. Their safes are designed with security and quality as the primary objective.

Their complete line of steel safes include commercial chests, wall safes, mini-



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slot depository safes, floor safes with hinge doors or lift-out doors, B and C rated chests, rotary hopper depository safes, B rated slot and sliding tray depository safes, as well as B rated front and rear drop depository safes.

Cannon Safe also manufactures a complete line of gun safes, including their "Quick Safe," which allows for the safe storage of loaded handguns while allowing the owner to still have quick access.

Some manufacturers have both dealer and retail sales programs. The customer sees the product at the dealer's store, then makes a direct deal with the manufacturer. This obviously robs sales from the dealers.

Some manufacturers have both stocking and non-stockling dealers. The stocking dealer spends payroll and overhead money to provide a place for the customer to view, touch and learn more about the product. The non-stockling dealer then steals away the customer because he can operate much more inexpensively than the stocking dealer. He can slash prices and still profit handsomely.

At Cannon Safe, their stocking dealer network is the backbone of their rapid growth. All retail inquiries are directed to the nearest stocking dealer.

#### Circle 273 on Rapid Reply

##### Fichet-Brauner, USA

Get the best of both worlds with safes from Fichet. Old world experience. Nearly 200 years ago, Fichet was the Safemaker of the Kings of France. Today, Fichet manufactures more High Security Safes than any other company in the world.

New World Service. Fichet-Brauner through its 300 Plus dealer network sells and services its fine line of safes.

At this time we are starting over again at Fichet. Selling directly to dealers at prices previously paid only by large distributors. We are full stocked and ready to ship on a days notice from our Multi-Million Dollar in-house inventory. We manufacture everything from Floor Safes, Rotary Hoppers, up through Vault Doors. We have the finest composite safes for Commercial and Residential use. Plus a full line of Fire and Data Safes.

Our TL-15, TL-30 and the newest, most desired TL30x6 safes have just been re-certified by Underwriters Laboratories newest testing method.

#### Circle 274 on Rapid Reply

##### Fort Knox Vault Door

Fort Knox has always been the most trusted name in security. With this in mind, the makers of Fort Knox Safes and Vaults create peace of mind for home and business. The peace of mind you experience by knowing that personal heirlooms, business and family records, guns, jewelry, and works of art are safe from burglars and fire.

If you're not concerned about home security, you should be! FBI crime statistics reveal that 1 in 4 homes will be burglarized in the next 10 years. If you're considering building, remodeling, or even buying a new home, you can create peace of mind and protect your valuable by adding a concrete security room and our exclusively designed vault door. The Fort Knox Vault Door

meets the same exciting standards as our famous line of vaults. It's designed for easy installation in a custom, walk-in security room. The heavy reinforced steel door can be set in a pre-formed concrete or cement block opening. With the Inside Release Mechanism, your security room offers safety for your family as well as protection for your valuables.

Fort Knox has led the industry with other innovations to make their vaults stronger, safer and virtually impossible to break into. Some of these features include Concealed Ball Bearing Hinges. This will prevent tampering, add security, provide full access yet not allow the heavy door to swing to far and cause damage to walls and furniture. Our patented Rack and Pinion Multi-gear Locking Mechanism and 25 one inch locking bolts, including our exclusive Star Corner Bolts offers the most security available. Fort Knox also offers the most extensive Lifetime Warranty available.

#### Circle 303 on Rapid Reply

##### Gardall Safe Corp.

Gardall Safe Corporation is known as the complete source for quality-built safes. They manufacture a complete line of record safes, depository safes, floor safes, wall safes, gun safes, data safes and custom-built safes.

Gardall insulated safes provide fire protection for paperwork and are ideal for home owners, offices and small businesses. Models 1310-3018 have the UL 1-hour 350 label which consists of an explosion test, a fire test and a drop test. Models 3620-4820 have a 2-hour Manufacturer's label. Additionally, these safes have some of the same features as our burglary safes like relockers and hardplates. A universal bolt down kit is available for models 1310-3018.

Their depository safes have been put to good use at gas stations, convenience stores, small businesses, restaurants, churches, bars and police stations. They are designed for the temporary storage of cash to give more security than a cash register during a hold-up situation until a deposit can be made. They are not meant to be used as unprotected storage safes for large amounts of cash overnight or for lengthy periods of time.

All Gardall burglary safes have the following features: anchoring holes in base of all depository safes; anchoring holes in the sides of the SL4000 and SL6000 wall safes; relocking device in all models except wall safes. Dual relocker on 12 x 12 doors; hardplate on all doors except with 4440 lock application or wall safes; interchangeable door system 9x9 and 12x12 for changing doors to suit customer's needs. Easy removal of door if defective and replacement of new door. Easy adjustment of door for better fit; UL listed Group II combinations lock or dual key lock are standard; Single Key-Op lock available as an option in place of a combination lock at no additional charge.

#### Circle 275 on Rapid Reply

##### HPC

Most locksmiths are aware of the wide variety of locksmithing products that HPC manufactures such as: key machines, key cabinets, code books, manuals, car

openers, pick sets and locksmithing tools. Something that many locksmiths may not be aware of is that HPC has recently started manufacturing an economical line of wall safes.

HPC wall safes are available in two sizes with a choice of locks. The Small Wall Safe's inside dimensions are 3 3/4" x 8 1/2" x 14". The Large Wall Safe's inside dimensions are 3 3/4" x 12 1/2" x 14". The Large Wall Safe has two inner containers for storing small items such as jewelry.

Both safes are designed so that they will fit easily between two vertical studs with centers 16 inches apart. One unique feature that allow the safes to be unobtrusive is HPC's innovative flush hinge; this feature enables the safe to lay practically in line with the wall. Once installed, both safes protrude only 1/16" from the surface of the wall.

The standard lock for these safes is a tubular lock. They are also available with a Medeco® keyed lock or a combination lock. The Medeco® lock provides a high level of security against picking and drilling of the lock. The combination lock is a Group II hand change type. It comes complete with a black dial and chrome spy-proof dial ring.

The wall safes are constructed of heavy gauge steel. Plus, all locking and hinge points are dual reinforced steel. They are painted with a two-step texture epoxy painting process in a neutral sand color, enabling them to be easily concealed.

These safes are manufactured with the same high quality as all other HPC products. For more information on HPC Wall Safes contact your Authorized HPC Distributor.

#### Circle 276 on Rapid Reply

##### Meilink

Meilink, a division of Fire King International, Inc. is very proud to announce that it will be moving its executive sales and administrative offices to its new corporate office and distribution center December 1, 1992. The new address is: Meilink, A Division of Fire King International, Inc. 101 Security Parkway, New Albany, IN 47150.

In addition to the new address Meilink has a new toll free number, 1-800-Meilink, which is currently in effect.

The new building is part of an overall \$4 million expansion that began with the acquisition of Meilink last November. The company has hired about 50 employees since the Meilink acquisition, which is considerably higher than originally expected. In order to accommodate the rapid growth of the Meilink line, Fire King allocated \$1 million of its expansion effort to equipment that was installed in the 12, 500 square foot addition to the company's manufacturing facilities.

This expansion and growth has been made possible throughout the rapid success of incorporating the Meilink safe line into the entire product mix. Meilink safes have been around since 1899 and Meilink presently has a corner on the market with the only Underwriters' Laboratories' TL30 and one hour Class 350 fire rating. The Gibraltar is available in 9 different sizes and features a 4 1/2" door constructed of 6000 PSI with 120,000 PSI



1/4" plate covering the entire door to resist drilling and cutting tools. Some other features include: 5 large 1 3/8" live bolts and 2 rear dead bolts, 5 separate relockers, 2 separate locks and ball bearing hinges. The Gibraltar has numerous other options.

#### Circle 277 on Rapid Reply

##### National Security

Smith & Wesson has recently chosen National Security to manufacture an exclusive line of safes. The tradition of excellence in security is now being carried on through this new quality line of safes. The safes are manufactured by skilled craftsmen at National Security Safe Co. Superior care and expertise is applied from the original design to the finished product. The obvious and subtle quality differences are reflected in each Smith & Wesson safe.

Smith & Wesson safes are manufactured with stylish, humidity resistant velour interiors. They are available in a variety of configurations designed to please the most discriminating owner.

The safes are available with a one and one-half inch quadwall design. This offers four layer fire protection with a double UL listed fire liner and double steel walls. A space-age ceramic door seal is installed in all of the Quadwall Models to protect against fire damage as well. All safes have S & G Group II with key locking dial standard.

Up to 20 hardened-steel bolts protect valuables when the door is locked. Bolts are up to 1-3/16" in diameter and penetrate both the top and bottom of the door, in addition to both sides. All bolts are chrome plated.

Both the interior and exterior of the safe undergo multiple sanding and priming operation before the durable, catalyzed acrylic urethane enamel final coat is applied, creating the mirror-like finish that is a hallmark of Smith & Wesson safes.

The Smith & Wesson safes are 100% American made. National Security Safe Co. offers a limited lifetime warranty on all Smith & Wesson safes. Sales will be made through authorized dealers only; no factory direct sales.

#### Circle 278 on Rapid Reply

##### Sentry

Every 50 seconds, a fire breaks out and causes property damage in the United States. In fact, fire departments report that most Americans will face a fire emergency at least twice in their lives.

That's why Sentry Group, America's leading manufacturer of fire-rated safes, chests, and security products, has developed many storage products that protect important documents, keepsakes, and small valuables from fire.

Sentry Group now offers steel safes with a Cor-Key lock as a unique sales opportunity for locksmiths who are looking for a product with special appeal to businesses and service organizations.

Sentry Fire-Safes with the Cor-Key lock offer simple key control and lock recoding with four billion possible combinations. Activated by magnetically encoded plastic card that's smaller than a credit card, the

lock can be recoded in seconds by a locksmith using a special coding gun and kit. A replacement key can then be provided, eliminating any risk to the safe's owner.

"Sentry safes with the Cor-Key lock are not distributed to discount stores and other retail outlets," said Todd Westman, sales and technical representative for Sentry Group. "Locksmiths will be able to market this exceptional product to colleges, nursing homes, hospitals, businesses - anyone who requires fire safety with the additional safety of the Cor-Key lock. It is ideal for situations in which one person is responsible for many safes, or in which safes have multiple users."

Because it requires no power, the Cor-Key lock is more reliable than many electrical locks that can be disengaged by cutting wires, or that can fail when batteries run low. The lock's construction eliminates openings or moving parts that can be dismantled.

Sentry Group includes the Cor-Key lock on safe models 4000, 4110, 4130, and 4310.

#### Circle 279 on Rapid Reply

##### Wilson Safe Co.

Wilson Safe Company of Philadelphia, PA has been serving the Security Industry for over 85 years. Currently, the third generation of the Wilson family is assisting locksmiths in selecting the proper safe for their customer needs.

Wilson serves as a distributor for their own imported top-quality fire safes, the Diplomat line offers one and two-hour rated units, each with combination and keylocks, adjustable shelving and inner storage drawers. The sizes range from .75 to 23.0 cubic feet. All two-hour units utilize a Group II combination lock.

Furthermore, a line that was introduced this past summer brings to Wilson stocks two sizes of under-the-counter units with dual key, B/C Rated Burglary Chests, which are available with Group II combinations or electronic locks.

In addition, a new line of TL-15 and TL-30 composite, two-hour fire-rated units are available. The TL-15 units start in the 1.8 cubic foot size range and continue to the 15.3 maximum space. The TL-30 models range from 4.2 to 30.5 cubic foot sizes and combine Group II combination and high security keylocks, three-way boltwork and glass relockers.

Wilson also carries a full line of service parts for their safes including replacement combination locks, keylocks, extra shelves, keyblanks and touch-up paint.

If a customer needs a custom unit made, Wilson's experience enables them to develop new options to fit even the most difficult situations. The company is continuously striving to develop new products to serve the industry in the future.

Wilson Safe can be reached on their nationwide toll-free number and will be ready to provide great technical expertise and friendly service.

#### Circle 280 on Rapid Reply

##### Orchard Lock Distributors

*Continued from page 26*

lock lines such as Arrow, Schlage, Yale, Simplex and many more in addition to door closers, exit devices, locksmith supplies and a full line of Key blanks.

Orchard Lock contributes its success to their ability to meet the needs of the customers they service...locksmiths. Under the guidance of General Manager, Larry Federico, Orchard is expanding its capabilities in a consistent and controlled manner. The company's commitment to more stock, a knowledgeable sales staff and same day shipment of most products makes Orchard Lock a benefit to the locksmith.

Sales Manager, Bill Simmons, and his staff are always ready to answer the companies toll free numbers and to offer courteous, professional service.

#### Circle 281 on Rapid Reply

##### RA-Lock Company

RA-Lock Company is a factory authorized sales and service center for Medeco Security Lock Company, Fort Lock Corporation, and Sargent & Greenleaf Company.

RA-Lock was established in 1958 and deals primarily with locks for all vending equipment, which includes but is not limited to cam locks, threaded extension locks, T-Handles, pop-out locks, switch locks, plug locks, padlocks, cash boxes and safes.

Locks are customized to individual customer specification with computerized key registration.

In addition to the distribution of Medeco, Fort, Sargent & Greenleaf, American, Master and Abus locks, RA-Lock also manufactures the RA-Lock Shackless Padlock for carwash equipment and the RA-Lock King Pin Lock for the trucking industry.

Key duplication and rekeying of locks is an everyday procedure at RA-Lock.

Fast courteous service at competitive prices is top priority at RA-Lock. Most orders are shipped the same day they are received.

If you have needs for specialty locks that fit vending machines, car washes, alarms, lockers, laundries, currency changers, cabinets, etc., we can fill that need in most instances.

#### Circle 282 on Rapid Reply

##### Security Lock Distributors

Autumn brought with it Security Lock Distributors' Electro Expo. The annual affair brings together the leading security device manufacturers with retailers that sell the products as well as specifiers and users. Over twenty manufacturers exhibited their products to approximately 1,000 attendees at the one day affair held at the Sheraton Needham Hotel in Needham, outside of Boston. Technical experts were on hand to demonstrate control mechanisms as well as locks, exit devices, closers and alarms. New units were shown at the Expo by Folger Adam, Locknetics, Arrow and Von Duprin, among others, while many manufacturers explained in detail the operation of a great variety of

*Continued on page 97*



**Letters, continued from page 6**  
**Tribute To A**  
**Veteran Locksmith**

Dear Marc:

A few months ago I read the article about a beginner locksmith who couldn't get any information from fellow locksmiths. I too can relate to that problem but I am very fortunate to have met a locksmith (with 30 plus years experience) who helped me learn the locksmith profession.

I had taken a correspondence course and did well with it. But I felt that "on the job training" was far better. Then I met Bill Wigginton who owns Bill's Lockshop in Amory, Mississippi. He began by telling me that he would help me in any way he could. I was welcome to come along as often as I wanted to, to ride along with him in the service truck when he was going on calls and observe him in the shop. When I left, he owed me nothing and I owed him nothing.

Soon after I started observing him, he let me start doing some of the work with his supervision. With the knowledge I was gaining from him I was able to start building my own business. As it was slowly building he let me use some of his tools and he also came and helped me out when I needed it.

Since I have another job, a full 40 hours a week, I worked with Bill as much as I could for a period of three years. We still work together on jobs that require more than one person. Now that I have my own business, I can still call on him for help or advice and he is always there and willing to help. Bill not only trained me, but gave me some tools all along, advice on starting a business, and offered financial help.

I am where I am today because of him. I will never forget all he has done for me. Thanks to "Bill's Lockshop" in Amory, Mississippi.

Jerene Fikes  
Mississippi

**Reader Eagerly Awaits**  
**Conclusion To 'Safe Spies'**

Dear Marc:

Having visited with Ryan of "Nelson's" in the Bahamas this year, the Dave McOmie article is so interesting I can't wait until next month.

There is also another Tann or Chubb sitting outside a burned out building I found while there. Maybe we need to send Dave back.

Thanks for such a great magazine!  
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North Carolina

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## Car Talk...

by Robert Sieveking

## The 1993 Chrysler

*"The '93 Chryslers will use the new key profiles shown in the illustration. Y155 is the master key."*

I'm sure we've all heard about the new Chrysler products this year. The new locks are slightly different than the double sided Chrysler locks that were introduced in 1989. The keyway is new. The code series is new. Depth and space information is very similar, but has been changed also. I guess that means that those try-out keys you bought back in '89 are not going to do the trick this year, and that X59 code card you bought for your 1200CM is going to be obsolete. What can I say? The professional locksmiths will prepare for the day someone calls to have a key made to one of these autos, and the amateurs will not. This article describes what I found, and what I feel is the minimum you will need to service the new '93 model Chrysler locks.

What is the new keyway, and how different are the depth and space specs? What specific models will have the new locking system in '93? Will the same wafers and keying kit work, that we used on the '89 and up locks? Should I stock an ignition or two? What would be the best method of making a key to one of these autos? How do those try-out keys work?

The new Chrysler double bitted key, is very much like the one introduced in 1989. The first Chrysler double bitted key, shown in illustration one, was the Y154. It had seven possible cut positions, only six of which were used in the ignition. The seventh position was used to facilitate the Valet/Master system. One key would enter all locks on the car. If the key had the proper cut in the seventh position, it would also operate all the locks on the auto. Though "valet" was stamped on the non plastic bow key, the key could be cut to operate as a master. If you peel the plastic off the head of a master blank, you will find that it is stamped "valet." At least, that has been my

experience.

The '93 Chrysler autos will use the new key profiles shown in illustration two. The Y155 key (Briggs & Stratton Groove 78) will operate as the master, as it will pass all the keyways on the new autos. A Valet key, Briggs & Stratton Groove 79, is designed to pass only the door and ignition plugs. This blank will not pass the glove box, rear seat, or rear compartment locks. The new design should prevent accidental manipulation of these cylinders by a valet key. If you have an ignition key, however, you can simply duplicate it over to a master blank, to have a master key. I guess that means good-bye to the "master/valet" dual code system introduced with the Y154 key. The new "J0001 to J3580" code series should be easier to work with. The J codes were published in the August and September issues of *The National Locksmith* magazine. (See the August issue, pages 80-87 and September, pages 72-86.) You may want to check your back issues, to be sure you still have them.

The X59 code card, for the HPC

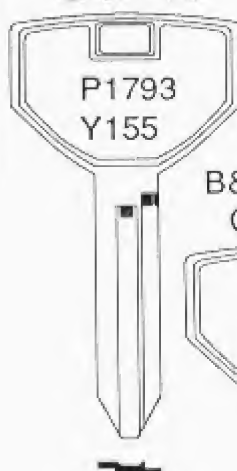
Chrysler Double Bitted Key  
1989-1992



Illustration 1 - Original keyway

Chrysler Double Bitted Key  
1993 -

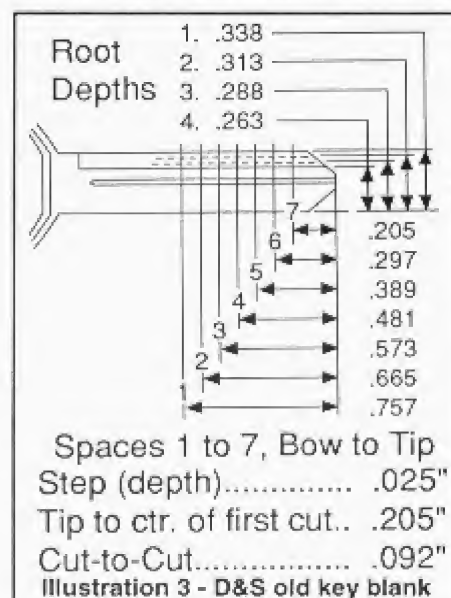
B&S 595895  
GRV - 78



B&S 322140  
GRV - 79



Illustration 2  
New keyway



Continued on page 78



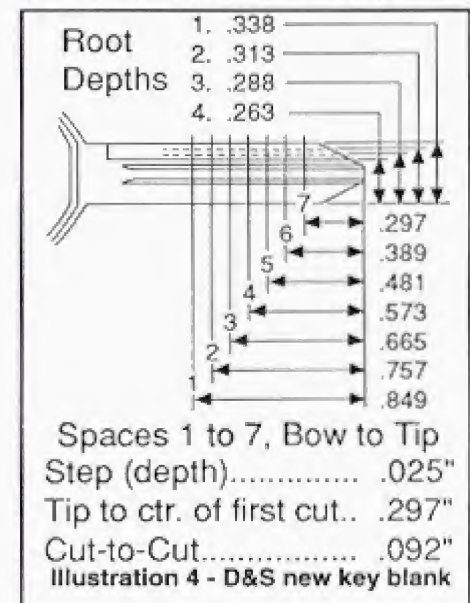


# ASP Covers the World of Auto Locks

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*Continued from page 68*

1200CM code machine was designed to work for the older Chrysler locks, but the new "J" series will require the new X-60 code card. Illustration three shows the depth and space information for the original Y154 key. Illustration four shows the depth and space information for the new system.



You will notice some similarities. The root depths, the step or difference between depths, and the distance from cut to cut all remained the same. Only the shape of the tip of the key, and the distance from the tip to the center of the first cut were changed. The new key has a more pointed tip, to make the key easier to insert into the cylinder. The narrow tip made the tip or number 7 cut impractical, so it was eliminated. All the cuts were pushed back .092 inches, exactly the cut to cut dimension. Notice the tip-to-cut center dimensions.

Application of this improved keying system will be pretty much across the board. The table in illustration five shows the Chrysler models that will be using the new system.

The keying kit which was originally sold to service the Double bitted locks was superseded shortly after its release in '89. If you upgraded the combining wafers, to meet this change, you already have the proper kit to service the '93 locks.

If you service a number of Chrysler accounts, you will want to stock four basic ignition service packages. They are: the B&S 702132 chrome large body (for the push to lock Acustar column), the B&S 702126 black plastic large body (for the push to lock Acustar column), the

*Continued on page 80*



Continued from page 78

### Lock Applications

The following 1993 autos will utilize the improved double bitted locking system.

#### Chrysler

Lebarron Landau (4 dr.)  
New Yorker  
Lebarron Coupe  
Lebarron Convertible  
Concord  
Imperial  
5th Avenue

#### Dodge

Spirit  
Full Size Van  
Dynasty  
Ram Charger  
Full size Pick-up  
Daytona  
Intrepid  
Dakota  
Shadow  
Caravan - Mini Ram Van

#### Plymouth

Caravan  
Acclaim  
Sundance  
Voyager  
Viper

#### Eagle

Vision

**Illustration 5 -Application Chart**

702131 module ignition, and the B&S 701941 snap in black ignition (for the Saginaw tilt column). These four service packages will allow you to replace almost any '93 Chrysler ignition. The lock bodies are interchangeable with the previous

### Bitting Chart

various locks of this vehicle will only contain indicated wafers

Lock assembly	1	2	3	4	5	6	7
Ignition	X	X	X	X	X	X	X
Door			X	X	X	X	X
Rear Compartment			X	X	X	X	X
Glove Box					X	X	X
Seat Back					X	X	X

Only the ignition cylinder will contain all seven wafers

**Illustration 6 -Bitting Chart**

double sided ignition cylinders, but the keyways are not. Door, deck, and auxiliary lock cylinders will probably be stocked only as needed.

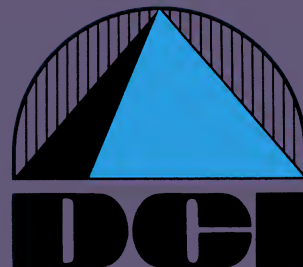
If called to make a key for one of these autos, the easiest method would be to remove a door cylinder to find cuts 3-4-5-6 and 7. Then progress the remaining cuts, 1 & 2, in the ignition. The chart in illustration six shows the location of wafers in the various lock cylinders of the car. Notice that wafers 3 through 7 are found in the door and rear compartment cylinders, and all seven positions are used in the ignition cylinder. Because some of the

new body designs will have the rear deck lock in the tail light housing, it could be easier to take down a door than remove the tail light cluster. If you read wafer locks, you may not need to disassemble anything.

Since I had such good luck with the Aero Lock try-out keys, on the original Chrysler double bitted locks, I decided to order a set for the new series. These are even easier to use than the first set. The new T0-65 tryout set contains 128 keys. The T0-65 set is designed to enable the locksmith to open and fit a complete key to the new Chrysler cars. There are 32 rings, which hold 4 keys each. By trying only one of the four keys on each ring, in the door cylinder, you will know if the ring contains an ignition key. You need only try a maximum of 32 keys to open the car. Once you locate the ring that opens the door, you simply try the four keys on that ring in the ignition. One of the keys will operate the ignition lock cylinder. If this sounds too simple to be true, you're right. You could move the car to a safe place, to finish the key making at this point, if necessary.

To make a working key, we must

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# Bits & Pieces

Informative Tidbits For The Security Industry



by Tom Seroogy

**W**e've seen plenty of changes for the 1993 year, especially, and as expected, in the automotive area.

Adding to its line of models using the Camry split wafer system, Toyota will be including the 1993 pickups and the Corolla sedan. The X217 keyblank will fit these models, although different numbers may be listed later due to differences in the shape of the bow.

Also new to the Toyota lock system will be the 1993 Corolla wagon. This model will employ a split wafer system that is altogether different than the Camry. This model will use the X223 keyblank and N0001-2000 code series. While we've found the bittings available for this series, we are still waiting for the spacing and depth specifications.

Another member to the split wafer lock club is the Geo Prizm. The Prizm uses the Toyota Camry system. The X217 keyblank will fit with this model. Pinning kit A30-108 is available from Auto Security Products distributors for the Camry style split wafer system.

\*\*\*\*\*

**The mechanical antitheft system** or MATS introduced in the 1992 GM B-Body cars is now on the 1993 full-sized GMC and Chevy pickups and vans. MATS was developed to help stop theft by reinforcing the column area around the sector gear area and adding a shroud section over the steering wheel lock plate. These additions were made to prevent forcible access to the sector gear and steering lock plate, typically done to start or move the vehicle. Also the ignition (B&S #701759) has been beefed up using stronger metals for the sidebar and cylinder to prevent forced turning.

New procedures and tools have

been introduced by Borroughs to disassemble the MATS column. They will be available in January and can be ordered under part #9002B. Other tools I might suggest is Borroughs' #BT9219 T30 Torx Bit. Too often I've found the screws to the GM airbag module/horn pad inaccessible when they're right in front of the turn signal arms and housing. This tool fits nicely into that area and allows you to easily undo the airbag module/horn pad screws. For more information contact: Borroughs, 29784 Little Mack, Roseville, MI, 48066-2298, (800)253-0138.

Also, look forward to the VATS system being added to the 1994 GM W-body cars which include the Cutlass, Lumina, Grand Prix, and the Regal.

\*\*\*\*\*

**And how about the new Chrysler LH body:** e.g. the Chrysler Concorde, Dodge Intrepid, Eagle Vision, and 1994 New Yorker 207. Nice cars, with new part numbers. Here they are, straight from Briggs & Stratton:

Ignition - #702131. Door - #702143. Trunk - #702134 (Vision, Intrepid), #702205 (Concorde). These parts come uncoded and with both a chrome and black cover. Use service kit # 701417 to pin them up.

The other part of our Chrysler LH saga involves cutting the key. It seems that the X60 card is not available yet, making it necessary for HPC 1200CM users to find an alternate mean for making a key. Here are two methods:

Set up your machine using the X59 card. Go to space 1 and insert the universal micrometer card #58. Move your spacing .092" to the right, this will be space 1 for the new key. Then, reinsert the X59 card. Cut your first space. Now move back to space 1 on the X59 card and make your second cut. Follow through the rest of the cuts until you get to space 6. This will actually be space 7 for the new key. Cut your key here but *do not cut space 7 on the X59 card*. Duplicate or cut the other side of the key the same way.

With the second method we will use the universal micrometer card #58, the CW1011 cutter and the regular tip-stop. Place the key in the vice using the tip-stop, then use the following depths and spaces to cut the key bow to tip: spacing — 1-.101, 2-.193, 3-.285, 4-.377, 5-.469, 6-.561, 7-.653. Depths — 1-.338, 2-.313, 3-.288, 4-.263.

\*\*\*\*\*

**In the world of locksmithing,** there's nothing more appealing than a tool that makes the job easier, especially when it involves simple, mundane tasks. And that, of course includes the computer. So, for those computer users, Treskat USA is offering some impressive software packages. For years Perfect Master 3 and 4 have been available. Well, they're up to Perfect Master 4.1. After setting up a few sample masterkey systems it is quite apparent that it is still easy enough for an apprentice to use, while at the same time offering many of the options and requirements necessary for larger, more complicated systems. Another package they have is Automaster. This package allows you to locate immediate information regarding virtually any auto your working on. code series, keyblank and key cutting information, code location, generating the first key, opening and even an area where you can add notes is provided. This has been handy on more than one occasion. For more information on available software contact: Treskat USA, Kissimmee, FL, (800)870-9696

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**It's an old trick to open trunks of** vehicles with electric trunk releases by running a wire from the fuse box to the back of the release button. To help with that job now is the Trunk Popper by Wedge-It Tool & Specialty Co. Just plug one end into the cigarette lighter and touch the other end to the back of the

*Continued on page 98*

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# The Lighter Side

Magic!



by Sara Probasco

**D**on's work often requires opening safes. Sometimes this is easy for him. Sometimes not. Much depends upon circumstances.

One morning last month he was called to our local sheriff's office to open a large Meilink fire safe. The safe was set back in a small closet, affording precious little working space.

Upon careful diagnosis, Don determined that he would have to drill in the correct spot to punch back the cam of the safe door bolt so that it could turn past the locking bolt of the combination lock. Once this hole was drilled, he would drive the cam back with a punch and hammer.

The drilling was accomplished as planned. However, because of the crowded conditions of the narrow closet, he was having trouble setting the punch and hitting it with as much force as was required. When he would hold the punch with one hand, he couldn't get enough "swinging power" with his hammer, yet when he would try using both hands on the hammer, the punch would bounce out of position upon impact.

"What can I use to secure the punch?" he wondered.

Stepping from the closet, he glanced about the room for an idea. There on a desk lay two heavy rubber bands.

"Hmmm. Maybe," he thought. "Mind if I use these?" he asked the deputy seated there. "I need them to get this safe open."

A puzzled look washed over the deputy's face. "Sure. Help yourself," he replied.

Picking them up, Don tested their elasticity between his hands as he returned to the closet. Carefully, he wrapped them around the punch, then

he stretched them taught around the safe's handle, creating enough tension to hold the punch in place. Now, perhaps he could use both hands on the hammer.

This idea was good in theory, but the tension created by the rubber bands was still insufficient to keep the punch from bouncing loose under the onslaught of Don's hammer.

Turning back to the office, Don said, "I wonder if one of you guys could give me a hand for a minute?"

Three deputies stepped forward, curious about what he was doing in there, anyway. "I'm going to hold this punch in place," Don said to one of the men, "and I need you to take this hammer with both hands and hit the punch one time, hard."

The man gladly complied while one or two of the others peered over his shoulder.

Don didn't bother to remove the rubber band, as it was not a hindrance to the operation. Handing the hammer to the deputy, he held the punch steady as the deputy gripped the tool in both hands, swung back ceremoniously, and gave the punch a sharp blow. Then Don reached to open the safe's door.

"That did it," he said to the men as the door swung back. "Thanks for your help."

Amazed by Don's actions, the deputies withdrew to the other side of the room and huddled together, speaking to each other in awed tones about how Don had opened the safe.

"Did you see that?" one of them whispered.

"No. You were in the way. What did he do?"

"He opened the danged thing with a rubber band!"

"Come on," one of the others scoffed.

"No fooling. I was watching him."

"How did he do it?"

"Well, to tell you the truth, I'm not exactly sure. A while ago, I heard him drilling something. I think he made a little hole in the safe door. Then he stuck his punch in the hole and tapped

it in tight. The next part is what I don't understand. He took this big rubber band, and he wrapped it around the punch and pulled it down around the safe handle. Then, he asked me to hit the punch with his hammer while he did something with the rubber bands, and the danged door came unlocked. He just reached over and opened it, slick as a whistle. Beats anything I ever saw."

"No, no, no. That can't be what happened," offered another onlooker. "When he tapped the punch, I heard a little 'pop.' He must have set off an explosion that blew the lock open. That rubber band was just a ruse."

"What's a ruse?" asked one of the other deputies.

"Something you do to throw everybody off the track."

"You're so smart," the first deputy retorted, "tell us how explosives got inside the safe."

For a moment, the challenged man seemed stumped. Then his face brightened. "He probably stuffed something in through that little hole he drilled before he inserted the punch. Yeah. That's what he did."

By this time, Don was about to erupt into convulsive laughter as he tried to gather his tools nonchalantly, without appearing to be eavesdropping on the men's conversation. He thought he was going to leave them wondering, but they weren't about to let him get away without an explanation.

"Hey, Don," one of the deputies called, "how did you get that safe open, anyway? With the rubber band or some kind of explosives?"

Don wiped the smile from his face as he replied, "Neither one."

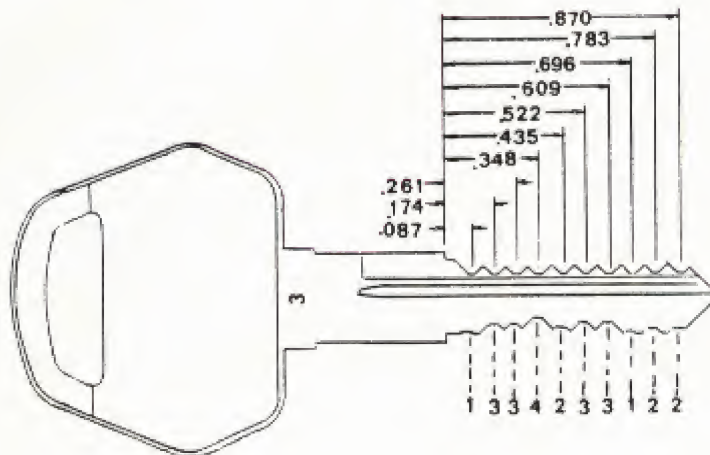
"Well, then, what did you use to get in it?"

"What did I use?" Glancing about, Don leaned forward conspiratorially as the men eagerly closed about him in a tight huddle, awaiting the shared secret of his success. His eyes twinkling, Don whispered to them the explanation he often gives to the uninitiated: "Magic!" §



# Saab Codes

AC2001-3192



## DEPTHS

0 -	5-
1- 0.283	6-
2- 0.260	7-
3- 0.236	8-
4- 0.213	9-

## KEYWAYS

HPC/Silca YM22AP  
Taylor X52  
Ilco SAA1



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## Saab Codes AC2001-3192

2001	2322432132	2061	2232433131	2121	2342332131	2181	2343222132	2241	3311331131
2002	2322422131	2062	2233433132	2122	2342322132	2182	2343212232	2242	3311321132
2003	2323422132	2063	2233423131	2123	2342312231	2183	2242232131	2243	3311311231
2004	2223432132	2064	2132433132	2124	2343322131	2184	2242212331	2244	3312331132
2005	2223422131	2065	2132423131	2125	2343312132	2185	2243232132	2245	3312321131
2006	2122432132	2066	2133433131	2126	2242332132	2186	2243222131	2246	3312311132
2007	2122422131	2067	2133423132	2127	2242312132	2187	2243212132	2247	3313321132
2008	2123432131	2068	3332423132	2128	2243332131	2188	3342232131	2248	3313311231
2009	2123422132	2069	3232433132	2129	2243322132	2189	3342212231	2249	3211331132
2010	3322432131	2070	3233423132	2130	2243312231	2190	3343222131	2250	3211321131
2011	3322422132	2071	3132433131	2131	3342332132	2191	3343212132	2251	3211311232
2012	3323422131	2072	3132423132	2132	3342322131	2192	3242232132	2252	3212331131
2013	3222432132	2073	3133423131	2133	3342312132	2193	3242212132	2253	3212311231
2014	3223432131	2074	3332433121	2134	3343322132	2194	3243232131	2254	3213331132
2015	3223422132	2075	3233433121	2135	3343312231	2195	3243222132	2255	3213321131
2016	3122432131	2076	3133433122	2136	3242332131	2196	3243212231	2256	3213311132
2017	3122422132	2077	2342432132	2137	3242312232	2197	2342233131	2257	3111331231
2018	3123432132	2078	2342422131	2138	3243332132	2198	2342223132	2258	3111321132
2019	3123422131	2079	2343422132	2139	3243322131	2199	2342213231	2259	3112331132
2020	2322433131	2080	2242432131	2140	3243312132	2200	2343223131	2260	3112321131
2021	2322423132	2081	2243432132	2141	2342333121	2201	2343213132	2261	3112311132
2022	2323423131	2082	2243422131	2142	2342323122	2202	2242233132	2262	3113331131
2023	2223433131	2083	3342432131	2143	2342313222	2203	2242213132	2263	3113321132
2024	2223423132	2084	3342422132	2144	2343323121	2204	2243233131	2264	3113311231
2025	2122433131	2085	3343422131	2145	2343313122	2205	2243223132	2265	2311332131
2026	2122423132	2086	3242432132	2146	2242333122	2206	2243213231	2266	2311322132
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2060	2333423132	2120	3243311231	2180	2342212132	2240	2113311132	2300	3212332132

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## Saab Codes AC2001-3192

2301	3212312132	2361	2312221131	2421	2111222131	2481	3211233131	2541	2312113232
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2349	3213313122	2409	2312212231	2469	2112213132	2529	3213122132	2589	2223321131
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2358	2311221132	2418	2213222331	2478	3312213231	2538	2311123131	2598	2123311232
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2360	2312231132	2420	2111232132	2480	3313213132	2540	2312123132	2600	3321321131

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## Saab Codes AC2001-3192

2601	3321311232	2661	3121332131	2721	3223231132	2781	3222111231	2841	2321113231
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2604	3322311231	2664	3122322131	2724	3121231131	2784	3223111232	2844	2322113132
2605	3323321131	2665	3122312132	2725	3121221132	2785	3121131232	2845	2323123132
2606	3323311132	2666	3123332131	2726	3122231132	2786	3121121331	2846	2323113231
2607	3221331131	2667	3123322132	2727	3122211132	2787	3122131231	2847	2221133132
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2611	3222311132	2671	2321313222	2731	3321233131	2791	3123121231	2851	2223123131
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2622	3123311132	2682	2121333121	2742	3223223131	2802	2221112231	2862	3321123131
2623	2321332132	2683	2121323122	2743	3223213132	2803	2223132131	2863	3321113232
2624	2321322131	2684	2122333122	2744	3121233131	2804	2223122331	2864	3322133131
2625	2321312232	2685	2122323121	2745	3121223132	2805	2223112231	2865	3322123132
2626	2322332131	2686	2122313122	2746	3122233132	2806	2121132131	2866	3322113231
2627	2322322331	2687	2123323122	2747	3122213132	2807	2121122132	2867	3323123131
2628	2322312231	2688	2123313222	2748	3123233131	2808	2122132231	2868	3323113132
2629	2323322131	2689	3321333122	2749	3123223132	2809	2122122331	2869	3221133131
2630	2323312132	2690	3321323121	2750	3123213231	2810	2122112231	2870	3221123132
2631	2221332131	2691	3321313221	2751	2321131131	2811	2123132132	2871	3221113231
2632	2221322331	2692	3322333121	2752	2321121131	2812	2123122231	2872	3222133132
2633	2221312231	2693	3322323122	2753	3322131131	2813	2123112132	2873	3222113132
2634	2223332131	2694	3322313222	2754	2322121132	2814	3321132131	2874	3223133131
2635	2223322331	2695	3323323121	2755	2322111231	2815	3321122132	2875	3223123132
2636	2223312231	2696	3323313122	2756	2323121131	2816	3321112231	2876	3223113231
2637	2121332132	2697	3221333121	2757	2323111232	2817	3322132132	2877	3121133132
2638	2121322131	2698	3221323122	2758	2221131131	2818	3322122332	2878	3121123131
2639	2122332131	2699	3221313222	2759	2221121132	2819	3322112132	2879	3122133131
2640	2122322331	2700	3222333122	2760	2223131132	2820	3323122132	2880	3122123132
2641	2122312231	2701	3222313122	2761	2223121231	2821	3323112231	2881	3122113231
2642	2123332132	2702	3723323122	2762	2223111332	2822	3221132132	2882	3123133132
2643	2123322131	2703	3223313221	2763	2121131132	2823	3221122131	2883	3123123131
2644	2123312132	2704	3121333122	2764	2121121231	2824	3221112232	2884	3123113132
2645	3321332131	2705	3121323121	2765	2122131131	2825	3227132231	2885	2331331132
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2647	3321312231	2707	3122323122	2767	2122111232	2827	3223132132	2887	2331311232
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2649	3322322131	2709	3123323121	2769	2123121131	2829	3223112132	2889	2332321132
2650	3322312132	2710	3123313122	2770	2123111231	2830	3121132231	2890	2332311231
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2652	3323312232	2712	3321221132	2772	3321121231	2832	3122132132	2892	2231321132
2653	3221332132	2713	3321211231	2773	3322131231	2833	3122112132	2893	2231311231
2654	3221322131	2714	3322231132	2774	3322121131	2834	3123132131	2894	2232331132
2655	3221312232	2715	3322211132	2775	3322111232	2835	3123122132	2895	2232311132
2656	3222332131	2716	3323221132	2776	3323121231	2836	3123112232	2896	2233321132
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2659	3223322131	2719	3221221131	2779	3221121332	2839	2321133131	2899	2131321131
2660	3223312132	2720	3221211232	2780	3222131131	2840	2321123132	2900	2132331131

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## Saab Codes AC2001-3192

2901	2132321132	2961	3233221132	3021	2231233132	3081	3331131131	3141	3132132131
2902	2132311231	2962	3233211232	3022	2231223131	3082	3331121132	3142	3132122132
2903	2133321131	2963	3131231132	3023	2231213232	3083	3332131132	3143	3132112231
2904	2133311132	2964	3111221131	3024	2232233131	3084	3332121331	3144	3133132132
2905	2331332131	2965	3132231131	3025	2232213231	3085	3332111332	3145	3133122131
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2910	2332312132	2970	3133211132	3030	2131223132	3090	3233131132	3150	2332133131
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2914	2232332131	2974	2332232131	3034	2133233131	3094	3131121132	3154	2333113132
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2917	2233312132	2977	2333212132	3037	3331223131	3097	3133131131	3157	2231113231
2918	2131332131	2978	2231232131	3038	3331213232	3098	3133121132	3158	2232133132
2919	2131322132	2979	2231222331	3039	3332233132	3099	3133111232	3159	2232113132
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2939	2233221131	2999	3231212232	3059	2331131231	3119	2132132132	3179	3232113231
2940	2233211132	3000	3232232131	3060	2331121331	3120	2132122131	3180	3233123131
2941	2131231131	3001	3232212231	3061	2332131232	3121	2132112132	3181	3233113132
2942	2131221132	3002	3233232132	3062	2332121332	3122	2133132131	3182	3131133131
2943	2132231132	3003	3233222131	3063	2332111232	3123	2133122132	3183	3131123132
2944	2132221131	3004	3233212132	3064	2333121231	3124	2133112231	3184	3132133132
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2950	3331221131	3010	3133222132	3070	2233131131	3130	3332112231	3190	3332133122
2951	3331211232	3011	3133212232	3071	2233121132	3131	3231132131	3191	3233133122
2952	3332231131	3012	2232212311	3072	2233111232	3132	3231122132	3192	3133133121
2953	3312221132	3013	2331233131	3073	2131131231	3133	3231112231		
2954	3332211231	3014	2331223132	3074	2131121331	3134	3232132132		
2955	3231231131	3015	2331213231	3075	2132131232	3135	3232112132		
2956	3231221132	3016	2332233132	3076	2132121332	3136	3233132131		
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2958	3232231132	3018	2332213132	3078	2133131132	3138	3233112232		
2959	3232211132	3019	2333223132	3079	2133121231	3139	3131132132		
2960	3233231131	3020	2333213232	3080	2133111331	3140	3131122131		



# Beginner's Corner

## Cutting Code Keys for Master Padlocks



by Eugene Gentry

**Y**ou are probably familiar with the Master Padlock; the laminated padlock that is pierced by a bullet and still stays shut. Master produces a variety of sizes in laminated padlocks that use the M1 key blank.

I did some cleaning in the shop and turned up about a dozen used Master padlocks without keys. I have a mobile unit and use the shop only for repair work, so it gets messy. I also found some loose pre-cut M1 keys that turned out to be a set of seven depth keys.

By doing some experimenting, I found that there are about five ways to make code keys for the Master padlock, some without expensive equipment. You can make code keys with:

1. A file and dial caliper.
2. A depth key and a duplicating key machine
3. Your Foley Belsaw key machine with code cutting wheel.
4. Your Foley Belsaw key machine with spacing micrometer attachment.
5. An expensive code machine.

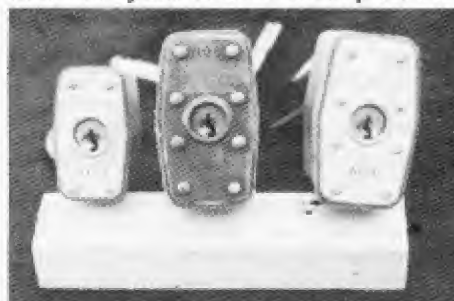
One thing you do need before you can cut any codes, is the Master Padlock Pin Tumbler Code Book. With this book you can look up any code number to find the cuts for the key. If you don't have the Depth and Spacing Book, I will give you some numbers for the Master Padlock. The key blank is IK or M1. There are four cuts. The spacings from the bow are 1 - .187", 2 - .312", 3 - .437", 4 - .562". The depths are:

0 - 0.275"	4 - 0.215"
1 - 0.260"	5 - 0.200"
2 - 0.245"	6 - 0.185"
3 - 0.230"	7 - 0.170"

Let's cut a key by code using only a file and dial caliper. On the keyway side of the Master padlock, at the top, is a number such as No. 1 or No. 5. This is a lock size identifying number on the

bottom, under the keyway is a black number, the key code, that you use for the code book. (See photograph 1.) The code number we are using is 2601. The code book tells us the cuts are 1-3-5-5.

Smooth the top of the blade of an M1 key blank and impression it in the padlock to find the spacing of the cuts. Make a tiny file mark on the impression



1. Master padlocks with code number under keyway.

marks so you can see them plainly. I use a round file to make the cuts as it makes the base of the cut a little wider. Now start making your cuts with the file, checking with the dial caliper from the bottom of the cut to the bottom of the blade. Your caliper should read .260" for the first cut, .230" for the second cut, .200" for the third cut and .200" for the fourth cut. When you finish filing, try the key in the padlock. If it turns hard, the cuts may not be exact. Check the key for impression marks on the cuts and file slightly to adjust.

Next, if you have some depth keys, it's easy to make a code key as you don't need any spacing information. The depth keys are numbered for the depth of the cuts they represent and they have the correct spacing. (See photograph 2.) I used the duplicating cutting wheel on my key machine, to make the code key, and it worked fine.

Place the key blank in the key machine, on the cutter side then place the number one depth key on the tracer side. Duplicate number one cut. Now put in the number three depth key, and cut number two cut. Put in the number five depth key and make your number three cut, use depth key number five

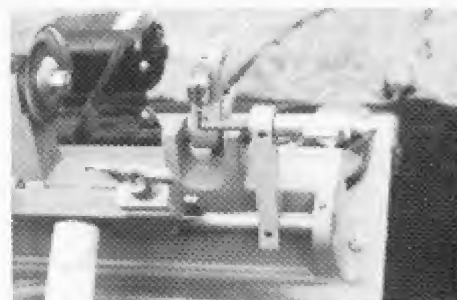


2. Depth keys for Master padlock.

and cut number four cut. The key will now be ready to work.

If you have a Foley Belsaw machine, put on the cutter wheel and matching tracer. To get your spacing on the M1, impression the key blank. Make the marks visible, and place this key on the tracer side, and a blank on the cutter side. The zero setting for this .275". For the first cut you want .260" from bottom of the cut to the bottom of the key, so you will set your depth micrometer at .015". For the second cut the setting will be .045", the third cut will be .075" and the fourth cut will be .075". The cutting wheel will not make the bottom of each cut as wide as it should be, so swing the cutter slightly with care to widen the bottom of the cut to about .035". If you look at a factory cut key, you will see the bottom of each cut is flat.

Another way to cut code keys is with the Foley Belsaw key machine with a spacing micrometer attachment. (See photograph 3.) I have one of these on



3. Spacing micrometer attachment.

Continued on page 99

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### Open Letter From Printz

*Continued from page 39*

ALOA Continuing Education programs (ACE). The ALOA show is the annual industry event. Here members can meet directly with manufacturers representatives to discuss problems and exchange ideas, so that we can all benefit from the improvements and new products which result. The ACE programs, provided throughout the country, allow members to learn from the masters of our trade and discover the best and most profitable ways to perform their profession.

ALOA has ID cards and Bonding available for members as a member service.

ALOA provides \$2500.00 in life insurance with your membership and has available a lower cost group health insurance plan which may reduce the cost of health insurance for some.

ALOA utilizes the services of professional lobbyists in Washington, DC to help us track and influence laws which impact on our profession. They have provided ALOA with a string of legislative successes on such things as low voltage exemptions, tax amendments and other items of interest. Their advance warnings on licensing and other legislation affecting locksmiths has allowed us to provide the local associations and chapters with time to react and campaign for a bill that will be the best for locksmiths.

Of course, there is the ALOA film library and public relations items which are available for purchase or loan and will help you to increase the public awareness of your business.

The ALOA Membership Directory which lists ALOA members is available to all members, manufacturers and potential customers. This allows companies who are looking for a locksmith to refer to the membership directory for an ALOA member. The ALOA office also gets many calls asking for assistance in locating a locksmith, and they always recommend a member.

I don't want to forget *Keynotes*, our monthly publication, which has reached such a level of quality that the \$1.44 a week that we pay in dues is repaid each week, in the information contained in *Keynotes* alone. Many of us take more than one trade publication and are exposed to the information in them all, and most agree that the articles are among the best in the industry.

ALOA also provides the Proficiency Registration Program (PRP) which may be one of the most important benefits ever provided to the industry. This exam was designed to give locksmiths a way of identifying for themselves in what areas they were most qualified and where they needed more training. But it has blossomed into a program in which many business and government purchasers are putting their faith that they will be able to find a qualified locksmith who has demonstrated their knowledge by successfully completing the exam.

Last, but not most important I believe, is the ability to meet and know the very nice,

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friendly, helpful people from around the world who make up this professional and can provide you with invaluable assistance. That hard-to-find key blank or lock part is often as close as your telephone and your ALOA Membership Directory. This would not be possible without a large trade association to bring us together.

So take the challenge, join the Associated Locksmiths of America and take the challenge to be an 'active supporter' of our industry; attend Chapter meetings, attend the national convention, your local association and support ACE programs in your area.

### **Access Control**

*Continued from page 43*

covered by an access control system with an audit trail and alarm points, the physical therapy area was covered by installing alarmed exit devices onto the unmonitored, secluded exit doors.

And of course - I got more money than rekeying a couple of doors.

As for our conclusion: The locksmith trade has evolved over hundreds of years. From the tinkerer to the lock installer. Unlike any other trade, his primary objective has been "CONTROL." The advent of electric control has created a whole new means for us to serve our customers. Let's grab on and go for the ride, there's 200 million dollars just waiting. §

### **Distributor Profiles**

*Continued from page 56*

Security Lock Distributors, con't. control devices designed for specific applications. Visitors were provided with literature packets describing products and applications.

Syd Schwartz, President of Security Lock Distributors of Needham Heights, MA., called the turnout greater than anticipated and attributed this to "the increasing awareness of the need for maximum security and access control in all types of structures and the opportunity to speak face-to-face with manufacturers." Along with sons David, Jeff, Mark and Howard, Mr. Schwartz hosted the exhibition, which included a complete buffet for visitors.

### **Circle 295 on Rapid Reply**

#### **So-Cal Lock & Supply**

In the summer of 1980, So-Cal opened for business in Southern California with three product lines, one phone line and a commitment to those starting out and those long established in the locksmith industry. With the rapid advances in the security industry, we felt that by staying within certain product areas that So-Cal could better serve the locksmith and still maintain a policy of no minimum purchase. We wanted to provide friendly, fast service with the ability to assist the customer with the order. So-Cal, like the successful locksmith is growing, and has now expanded to over 30 different product lines in stock and more than 2500 square feet of warehouse.

If its foreign or domestic automotive locks, parts, and service kits you are looking for, we most likely have it in stock.

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National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

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We are a stocking distributor for ASP, All-Lock, and B & S. Key blanks in stock are Ilco, Jet, and ESP and original blanks from our product lines are also stocked. Tools such as pin kits from LAB & OEM, picks, opening tools, Baxter code books and guide keys, and key machines are shelf items. We stock cam locks, padlocks, mailbox locks, key cabinets, and much more.

The original idea and goal for opening So-Cal was to serve the small locksmith who was unable to meet the minimum purchase requirements of the larger distributors. We soon found that we also filled a void for the larger locksmiths. We also understand in these hard economic times that you cannot always meet a minimum order.

We have expanded our toll free 800 number to the national level with 4 open lines. Our warehouse hours are 8:30 am to 5:00 pm Pacific Time. For your faxing convenience, our Fax number is on line 24 hours a day, 7 days a week.

Circle 296 on Rapid Reply

### '93 Chrysler

*Continued from page 80*

note the cuts on the tryout key that operated the ignition. You will notice that the tryout keys have only two depths. There are shallow (S) cuts and deep (D) cuts. The shallow cuts are halfway between a 1 and a 2 depth, and the deep cuts are halfway between a 3 and a 4 depth.

If, for example, we find that the tryout key combination was D-D-S-D-D-S-S, we would code cut a key to the combination 3-3-1-3-3-1-1. Be sure to cut the key on both sides, as these are true double sided locks. The key must be cut on both sides to operate the lock cylinder.

Try the cut key in the door. It should operate the lock. Look for impression marks in the last five positions of the key. If a position marks, code cut that position, on both sides of the key, to the next deeper depth. The key must operate the door cylinder smoothly. After completing the door portion of the key, try it in the ignition. The key should operate the ignition. It may impression in the first two positions of the key. If the key shows impression marks, cut only those positions that mark, to the next depth. You should be able to make a smooth working key in no time.

Just remember, try-out keys are a tool. They are not simply a ring of "master keys." Try-out keys are a very specialized tool, that can save you a great deal of time if used properly. You will, however, need a certain amount of skill and experience to make profitable use of them.

Good Luck. §

### Bits & Pieces

*Continued from page 83*

you know if the lighter is supplying power. A secondary ground wire is supplied for non-working lighters.

Another product by the same company is the Wedge-It window wedge and door panel tool. This, as it turns out, is a neat combination of tools. A large, easy to grasp handle has been added to a standard window wedge allowing for easier



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insertion and wider wedging of the window as a window wedge, and a faster, cleaner removal of the door panel and its clips as a door panel tool. For more information contact: Wedge-It 717-122 Avenue NE, Suite B-4, Bellevue, WA 98005, (800)452-2304.

\*\*\*\*\*  
Recently I was informed that some of the larger auto manufactures were interested in providing their dealerships with pinning kits. Being from the Chicago area, I am aware of at least one Curtis salesman who trained several of the local import auto dealers to rekey their brand of ignition and door locks. And, for a while, he provided them with pinning kits, facecaps, and other lock parts. As a locksmith what do you do?

I approached that problem two ways. First, I provided same day rekey service to all my dealers. I found that while many of them were capable of rekeying, they found it tedious and their work undependable. Many times, due to improperly cut keys, the lock would work with one of the customer's key but not the next. As a result, they were happy to give me the work.

Second, I offered next day service for all locks dropped off at the shop. For a small fee I would deliver them, or they could pick them up. What was their choice? With two exceptions in seven years, they chose to have me come to their dealership and do the rekeying; even though they had to pay extra for the extra service call.

As locksmiths, unless we want to give the business back to the dealership and the manufacturer, we need to step out and offer extra service to our customer. When I first informed the dealers of the rekeying program I offered, they couldn't believe it. They didn't know anyone could do it, and they didn't want the task of rekeying the locks. I was their alternative.

This same approach has been successful with autobody shops as well. I was informed by one locksmith that he has a program where every Tuesday he stops by various body shops in his area. He picks up the locks that day and returns them the next. Previously, the only alternative these shops had was to put in a new lock and give the customer another set of keys, or change all the locks on the car. This locksmith gave them an easy, money making alternative. §

#### **Beginner's Corner**

*Continued from page 95*

my machine and its works very well.

Place your M1 blanks on the tracer and cutter side. Set your spacing micrometer at .185" for the first cut, .310" for the second cut, .435" for third cut and .560" for the fourth cut. Set the depth micrometer at the proper setting for the cuts. Here again, widen the bottom of the cuts. You can do this with the spacing micrometer by turning about .015" on each side of the proper setting.

Finally, if you are a new locksmith and have a code machine, you will whisk those code keys out in nothing flat. One machine that has caught my eye is that new HPC Punch Machine (1200PCH). It's light weight and portable. I think it will be my



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